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# **USSR** Report

**HUMAN RESOURCES** 

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LABOR

BATALIN ON NEW RECRUITMENT POLICY FOR SIBERIA, FAR EAST

Moscow SEL'SKAYA GAZETA in Russian 4 Oct 84 p 3

[Interview with Yu.P. Batalin, chairman of the USSR State Committee for Labor and Social Problems, by a TASS correspondent: "With Concern for the Individual"]

[Text] Our nation is rightly referred to as a huge construction site. New cities are coming into being, industrial enterprises are being placed into operation, and hydroelectric power plants, pipelines, main rail lines and highways are being built. The organized recruitment of workers is helping to meet the need for additional workers at the large enterprises and construction sites located in areas with a shortgage of manpower resources. The public recruitment of the youth has become an active form of sponsorship of the largest new construction projects by the Lenin Komsomol.

Yu.P. Batalin, chairman of the USSR State Committee for Labor and Social Problems, told a TASS correspondent about the improvements in the organizational procedures for distributing the work force:

Each year around 400,000 people are sent to the nation's enterprises and construction sites as part of the organized recruitment and public call-up of youth. They are helping to develop the natural resources of Siberia, the Far North and Far East, and to build and master the capacities of extremely important national economic facilities. It is this cadre recruitment method which is making it possible to increase the state's influence on the migration processes.

Most of the enforceable acts governing the procedure for planning and conducting the organized recruitment of workers were worked out and put into effect at the end of the 40's and the middle of the 50's. Naturally, many of them are now obsolete, do not conform to the altered management conditions and do not take into full account the increased level of employment of manpower resources or the improved level of well-being, educational and professional training of the able-bodied population.

A total of 85 percent of the people sent out to jobs by organized recruitment are below the age of 40, and more than 70 percent of them have a specialty. A

total of 67 percent of the workers who have concluded agreements have a secondary or secondary specialized education. The age, educational and skills level of the workers is causing them to make greater demands with respect to working and living conditions at enterprises and in organizations receiving the workers.

In some places, however, the organized recruitment and public call-up are regarded as a guaranteed source for replenishing the workforce, one which does not require any special attention or concern. The newly arriving workers are not always provided with the necessary production, housing or personal service conditions. Because of a lack of housing enterprises and construction projects also sometimes refuse to accept workers with families, who are the most inclined to remain at the new site, under the organized recruitment or public call-up. This is in great part the cause of the disporportion which has developed among individuals concluding labor contracts for specific periods. At the present time 80 percent of them are men and only 20 percent are women. This is why complex social and demographic problems are arising in certain areas.

A meeting of the Politburo of the CPSU Central Committee reviewed the question of steps to further improve the organized recruitment of workers and the public call-up of the youth. A decree was passed on this matter by the CPSU Central Committee and the USSR Council of Ministers. It is designed to enhance the effectiveness of the organized form of interterritorial redistribution of manpower resources. It calls for increasing the role of planning in the conduct of organized recruitment and public call-up of the youth, and for increasing the responsibility of enterprises and organizations for preparing to receive the workers and for creating the necessary working and living conditions for them.

Enterprises receiving workers under organized recruitment or public call-up are required not only to provide them with housing, but also to promptly decide on how to use their labor efficiently. Unfortunately, we still have frequent cases in which new arrivals wait many days before being sent out to a construction or installation site, to a shop or a timber felling area. And they are far from always assigned jobs in their speciality.

To make it possible for each arriving worker to work at full capacity, it is planned to create the conditions necessary for them to improve their skills and to master second or related jobs. Young men and women who still do not have a specialty sometimes go to the new construction sites. Helping them select a speciality to their liking and to rapidly master it is an important aspect of the work of enterprises and organizations. Workers in the personnel sections and public commissions for labor under the trade union committees have a special role in this.

It is planned to systematically increase the number of workers with families sent out to jobs. This will unquestionably help to retain personnel at the new sites and by doing so, to create stable labor collectives.

The material support norms are being increased for individuals concluding labor agreements for a specific period of time. I shall discuss this in detail. There is to be a more differentiated approach for determining amounts of one-time monetary allowances paid to workers sent out under organized recruitment or public call-up. The maximum amounts of the allowances will be established for all construction and installation organizations and for all timber-procurement

enterprises of the USSR Ministry of Timber, Pulp and Paper, and Wood Processing Industry located in the North, Siberia, the Far East and the Urals. This also applies to enterprises and organizations in the Nonchernozem Zone of the RSFSR and in Kazakhstan's Gurev and Mangyshlak oblasts.

The preferential terms for traveling to the new job site are being improved. Among other things, the people involved are being given the right to select the type of transportation. This was not the case in the past. The weight of the belongings which the worker and members of his family are permitted to take with them is being practically doubled. The amount of per diem expenses is being increased considerably. Wages are going to be paid for the time spent en route and the days involved in assemblying the workers for the trip, as well as for the time spent settling at the new place of residence. When a worker acquires a family he is to be issued loans for setting up housekeeping. One other new thing is the fact that the uninterrupted length of service is to be retained for receiving percentage increases or one-time rewards for long service, if they are in effect at the new place of employment.

We can see that the decree adopted by the CPSU Central Committee and the USSR Council of Ministers is imbued with concern for the man of labor, with those who are unafraid of difficulties and go out to build the cities and lay the main lines, to build new plants and factories, to exploit the mineral wealth and to develop the Nonchernozem Zone.

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CSO: 1828/51

LABOR

#### LITHUANIAN LABOR OFFICIAL INTERVIEWED ON WORK REGULATIONS

Vilnius SOVETSKAYA LITVA in Russian 9 Sep 84 p 2

[Interview with N. Andrikonis, department chief in the Lithuanian SSR State Committee for Labor, by correspondent G. Litvintsev: "What Is New in Labor Regulations"]

[Text] The USSR State Committee for Labor and Social Problems recently approved the "Standard Internal Regulations for Blue-and White-Collar Workers of Enterprises, Establishments and Organizations," which were coordinated with the AUCCTU. They include a number of new and important provisions. N. Andrikonis, department head in the Lithuanian SSR State Committee for Labor, talked to our correspondent G. Litvintsev about them.

[Question] The standard internal labor regulations which have now been superceded had been in effect since 1972. Substantial advances have been made in the organization and management of labor and production since then. What general trends are reflected in the new document?

[Answer] I shall name the main ones: continuing democratization of production management along with an all-around strengthening of discipline. The general section states that socialist labor discipline is more than just strict observance of internal regulations. It also involves having an aware and creative attitude toward the work, assuring that it is of high quality and making productive use of work time. These two processes are not in opposition. They supplement each other.

The new addition of the Standard Regulations are based on two documents—the Law of the USSR "On the Labor Collectives and the Enhancement of Their Role in the Management of Enterprises, Establishments and Organizations" and the decree passed by the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU, "On Intensifying the Work of Strengthening Socialist Labor Discipline." They also take into account other recent legislative enactments.

A great deal of attention is given to the role of the labor collectives, which was not the case in the old standard regulations. To begin with, they are authorized to establish the internal labor regulations as applicable to the operating conditions of their own enterprise (with the approval of the administration and the trade union committee). From now on the labor collective will

also be able to decide on matters pertaining to the application of those regulations—within the limits of the authority granted them by law, of course. There is also a point which states that the effective use of the authority granted the labor collectives is an extremely important area of the work of instilling and strengthening socialist labor discipline.

The administration's duties have been enlarged. It must create for the labor collective the conditions necessary for it to exercise its authority as specified by law and see to it that labor productivity and the effectiveness of public production are thoroughly increased and that the quality of the work is improved.

A special point covers the development of the brigade forms of labor organization, which, as we know, open up extensive possibilities for participation by the workers in production management.

[Question] Please tell us about the provisions which are of interest to literally everyone—those pertaining to moral and material incentives, for example, to the procedure for discharging workers from the job, and others.

[Answer] Once again, I must begin by mentioning the increased role of the labor collectives. They now have the right to apply social and material incentive measures for successess achieved in the work, to express their opinion on who should be recommended for state awards, and so forth. There are no substantial changes in the rest of this section of the standard regulations.

With respect to being discharged from the job, there are significant additions. Blue- and white-collar workers have the right to abrogate a labor agreement concluded for an indefinite period of time, after notifying the administration in writing 2 months in advance. If a person is discharged for valid reasons, that period is cut in half. I must stress the fact that the time spent performing jobs to which a blue- or white-collar worker has been transferred for violating labor discipline is not included in the period of advance notification of discharge.

[Question] Tell us in detail about measures designed to strengthen labor discipline.

[Answer] The new standard regulations establishes a role for the labor collectives in this matter. They "...apply strict, comradely demandingness to workers who do not perform their duties conscientiously, apply measures of public pressure (reproofs, public reprimands) to violators of discipline, submit information to the comradely courts for review, and raise the issue of applying the measures of pressure specified by law. In addition, the opinion of the labor collective must be taken into account when imposing penalties upon a worker.

The administration is granted additional authority. For systematic violations of labor discipline, for absenteeism without valid reasons or for being on the job in a state of intoxication it can transfer a blue- or white-collar worker to a lower-paying job or assign him to a lower position for a period of up to 3 months, regardless of the worker's profession or specialty. The point covering the discharging of workers has been expanded somewhat. This measure may be

applied (in additon to the commonly known reasons) in those cases in which a worker has been absent from his job station for more than 3 hours during the day without valid reasons, as well as for being on the job in a state of intoxication.

The regular leave time for blue- and white-collar workers who have been absent without valid reasons is reduced by the number of days they were absent. It may not be less than 12 work days, however.

I must direct the readers' attention to the fact that incentive measures do not apply to a worker during the period of effect of a disciplinary penalty. This is also specified in the new standard regulations.

In conclusion, I would like to stress the fact that the regulations are designed to promote the indoctrination of blue- and white-collar workers in the spirit of a communist attitude towards work, the further strengthening of labor discipline, the organization of labor on a scientific basis, the efficient use of work time and the enhancement of labor productivity and of the effectiveness of public production.

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### LABOR OFFICIAL DESCRIBES INCENTIVES TO RAISE PRODUCTIVITY

Moscow FINANSY SSSR in Russian No 6, Jun 84 pp 29-34

/Article by V. D. Rakoti, deputy department chief, USSR Coskomtrud /State Committee for Labor and Social Problems/: "Ways To Provide Labor Incentives"/

/Text/ The top-priority task of stimulation is a multi-faceted provision of incentives to speed up the growth of labor productivity, by means of which in 1984 it is intended to obtain 97 percent of the increase in the national income. In industry labor productivity must be increased during the current year by 3.4 percent, and this will ensure 90 percent of the increase in output.

Higher growth rates for labor productivity can be achieved by a complex of measures. Playing a major role among these are combining occupations and expanding the zone of servicing and completing a large volume of operations. Raising the technical level of production and the quality of the products being turned out, as well as the complication of the economic ties, require a responsible attitude toward the matter at hand, an increase in the occupational skills of the workers as well as the qualifications of the engineers, technicians, and office personnel.

Many measures for stimulation have undergone the test of time, employing the Shchekin method of operation, the Vazov system of wages, and other progressive methods for providing material incentives, and they have shown a high degree of effectiveness.

The conditions of the experiment have provided for expanding the rights of the enterprises to stimulate the increase of labor productivity and quality. For a high degree of occupational skill it is permitted to establish for the wage rate of highly skilled workers employed on particularly important projects supplementary payments amounting to as much as 16 percent for workers in Category 4, as much as 20 percent for those in Category 5, and as much as 24 percent for those in Category 6. (At ordinary enterprises supplementary payments are permitted up to 12 percent of the wage rate, i.e., their amounts can be doubled). It has been proposed for highly skilled workers, employed in particularly important and responsible projects, have wage amounts established up to 250 rubles a month (at present this can be done up to 200 rubles). At the same time, by virtue of the economies achieved in the wage fund, it is permitted to add supplementary payments to the wage rates of highly skilled engineers and technicians, as well as office workers, in amounts ranging up to 50 percent of the

At the present time, extra payments of such a sum have been established only for designers and technologists, while for the remainder—they only go up to 30 percent of the wage rate. In accordance with the existing procedure, the combining of occupations and positions exceeding the bounds of a single category of workers must be provided for by a schedule approved by higher-ranking organs. For those employed at enterprises which are participating in the economic experiment the above-indicated schedule is not required.

The enumerated forms of economic incentives are all-around they are provided for the enterprises of all five ministries operating under the conditions of the experiment. Nevertheless, the characteristics of the individual sectors are taken into account. In the food, light, and local industries the wage amounts for the workers can be increased only to 230 rubles, and not to 250 rubles, as is the case at machine-building enterprises; this is connected with the different level of the wage rates. But in these same three sectors it is permitted to establish additional amounts to the salaries of enterprise directors. In the Ukraine, where a three-unit system of administering the food industry is in effect, it is possible add extra payments for skilled work to the wages of workers in the administrative apparatuses of the oblasts, utilizing for this purpose economies in the wage funds of the oblast administrations.

Expanding the rights with regard to establis ing added amounts and supplementary payments makes it possible not only to raise wages. In order to establish them, it is necessary, first of all, to achieve economies in the wage fund. In order to economize on the fund, it is necessary to increase labor productivity. This must find specific expression either in reducing the number of workers, or in increasing production volume with the same personnel, or, finally, with both together. Increasing labor productivity presupposes a revision of obsolete labor norms, the introduction of technically founded norms of development, service time, norms of number, elimination of idle times, the loss of work time, and the promulgation of other measures with regard to improving the organization of setting norms for labor.

Increasing wages by means of bonus and supplementary payments, in contrast to establishing higher wage rates, has one important characteristic. Bonuses and supplementary payments are not established "forever." They depend on work results. When the labor indicators worsen, the bonuses and supplementary payments are reduced or are completely eliminated. This is a major incentive.

In 1982 supplementary payments for combining occupations and expanding service zones were received by 1.4 million persons, or more than 10 percent of the time-rate workers in industry. The average size of the additional payments amounted to 21--24 rubles per person per month, while for highly skilled workers, taking additional bonuses into account, it amounted to 40--60 rubles per person per month.

The conditions of the experiment have provided for a substantial change in the procedure to be used in awarding bonuses to workers. One of the new, principal factors in organizing the awarding of bonuses for the basic results of economic activity is the conversion from paying out one bonus for several indicators to three bonuses—one for each of the three basic indicators for the awarding of

bonuses, i.e., the transition has, for all practical purposes, been carried out to providing incentives by factors (delivery on contract terms, labor productivity or product quality, production cost or profit). This change ought to strengthen the dependence of the awarding of bonuses on the improvement of every indicator of providing incentives and thereby increasing the stimulating effect of the bonuses.

Introduction of the awarding of bonuses by factors required that a number of problems be solved, first of all, ensuring that the leading role in material incentives be played by the fulfillment of contractual obligations with repect to product deliveries. And just how is this achieved?

In the first place, this indicator, among the other indicators for awarding bonuses to the management personnel at enterprises, is individuated as to the size of the incentives which are computed depending on it. In the electrical equipment, food, and light industries 60 percent of the bonuses being paid out at the present time to industrial workers for the basic results of economic activity will depend on deliveries in accordance with contract terms. In heavy and transport machine building a majority of the bonuses (i.e., more than 50 percent) are provided for this, while in Lithuania's local industry this is true for all bonuses. In the second place, the awarding of bonuses for fulfilling contract obligations with regard to deliveries is carried out independently of the performance with respect to other indicators. In the third place, the awarding of bonuses for fulfilling the other incentive indicators is carried out under the mandatory condition that it will not exceed the percentage limit. of the under-delivery of products according to contracts. In the fourth place, there has been a reduction in the awarding of bonuses in the role being played by the most important products list, which, to a considerable extent, duplicates the deliveries in accordance with contract terms. For this purpose there has been a substantial reduction in the number of positions of the most important products list, the non-fulfillment of even one of which completely deprives workers of the right to be awarded bonuses. Because of this, the system of awarding bonuses ought to increase the importance of fulfilling contracts with respect to deliveries. Finally, special bonuses have been introduced for fulfilling all contracts with respect to product deliveries for an entire year. They can be paid out to the management personnel of enterprises in amounts of up to triple the wage rate and in excess of the limiting amounts which have been established for the awarding of bonuses.

There has been a noticeable change in the composition of the basic indicators for awarding bonuses to the management personnel of enterprises. No more than three of them have remained, instead of the present five or six (in light industry productivity and quality have been combined in one indicator for purposes of awarding bonuses). The main evaluative indicator of product deliveries in accordance with contract terms is used in all five ministries. Also taken into account everywhere in awarding bonuses is either the reduction of production costs or the growth (increase) of profits. Growth of labor productivity is established in machine building and light industry, while a specific proportion of products in the high (or highest) categories within the total volume of production has been established in the food and light industries.

To this it must be added that at enterprises for which no growth or increase of profits is planned the management personnel are awarded bonuses for over-ful-filling the plan with respect to profits. In the baking industry, where the product is delivered on the basis of daily orders, the following two indicators have been established for awarding bonuses: product quality and growth of profits. In the electrical equipment industry the chief of the technical control department will be provided incentives depending not on the indicators in common with the indicators of the other management personnel but merely for his own: the observance of the standards and engineering specifications for product output, implementation of measures to upgrade the quality of items, as well as the prevention of damaged goods and violations of production technology.

In principle, all the existing maximum amounts of bonuses for the basic results of economic activity have been retained. However, the limiting amount of 0.5 of the wage rate per month is now provided for only two indicators of the bonus-awarding system (for example, in the Ministry of Heavy and Transport Machine Building and the Ministry of the Electrical Equipment Industry—for product deliveries according to contract terms and for growth in labor productivity). For a reduction of outlays or a growth (increase) of profits use is made of a limit which is effective in industry for lowering material expenditures per ruble of output—0.25 of the wage rate per month.

Industry now has 1.4 million brigades, uniting almost 60 percent of the workers. It is very important, therefore, to increase the result coefficient of their work. In order to intensify the stimulation of the brigade groups, it has been provided that, when a brigade completes an assigned volume of work with a smaller number of personnel, there can be an increase of as much as 10 percent in the maximum amount of bonuses paid to workers out of the wage fund.

Certain principles used in determining the amounts of individual bonuses have been changed. There has been increased attention paid to the optimal expenditure of the wage fund in the industrial ministries. Except for the Ukrainian SSR Ministry of the Food Industry, they have provided that, in case the growth rate of wages outstrips the growth rate of labor productivity, when a portion of the economic-incentives fund is reserved, bonuses to the management personnel are reduced accordingly. In the food industry the reserving of this fund has not been established. In all five ministries the procedure has been regulated for determining the size of the bonus for reducing outlays per ruble of output or the growth (increase) of profits. Bonuses are not awarded simply for fulfilling the plan with respect to this indicator, as distinct from others. The bonuses are computed for each tenth of a percent of outlays reduced or each percentage point of profit growth with respect to the plan or in excess of it, i.e., following the same procedure which is used to carry out deductions for contributions to the economic-incentives fund.

In accordance with the state plan for social and economic development, a number of complex problems involving speeding up scientific and technical progress will be solved in 1984. We must master more than 1,150 new types of equipment and carry out more than 300 assigned tasks with regard to introducing progressive technologies, as well as means of mechanization and automation. In all, taking into account the plans of the ministries and departments, provision has been made to master 3,900 types of machinery, equipment, instruments, and

and materials, as well as to put into operation 609 ASU's Automatic Control Systems/ for engineering processes. This program of operations will ensure industry of a reduction in production costs by 3.9 billion rubles and a provisional freeing up of approximately 700,000 persons.

An important role in stimulating the introduction of new equipment has been allotted to bonuses. In accordance with the previously existing procedure, if the plans with regard to new equipment were not fulfilled, the bonuses for the basic results of economic activity are reduced by as much as 50 percent. In order to observe the established procedure, in case of a breach in the above-indicated plan, it was sufficient to reduce the amount of the bonus by only 5-10 percent, even though an important operational indicator had not been fulfilled. Hence, for the management personnel at enterprises (with the exception of the food industry) it has been provided that in such a case bonuses are to be reduced by at least 25 percent. It should be noted that now this procedure has already gone beyond the experimental stage and has been established in all the production sectors of the national economy.

Moreover, for creating and introducing new equipment which measures up to or exceeds the world level, it is permitted to pay out bonuses to management personnel and other specialists in amounts of as much as three wage rates in excess of the established maximum limits.

To a considerable extent, the stimulating influence of bonuses depends on the complete accounting of each employee's personal labor contribution. An effective means for more precisely determining labor results is, as experience has shown, the application of the coefficient of labor participation. But at the present time this coefficient is utilized only in awarding bonuses to workers. Under the conditions of the experiment permission has been granted to apply this coefficient in determining the sizes of the bonuses for engineers, technicians, and office employees at enterprises of the Ministry of Heavy and Transport Machine Building and the Ministry of the Electrical Equipment Industry.

An important step has been made in ensuring the stability of the norms of planning the wage fund and forming the economic-incentives fund, strengthening the dependence of the absolute amounts of the funds on the degree of improvement in the work results, and the creation among the labor groups of confidence that the computation of the appropriate funds will be guaranteed.

It has been established that planning the wage fund and forming the economic-incentives fund in the industrial ministries which have been shifted onto the economic experiment (except for the wage fund in the Ministry of Heavy and Transport Machine Building) are carried out in the following manner. The funds of the current year constitute a sum consisting of the fund for the base year and its increase, calculated with respect to the norm for measuring the improvement in the operational indicators. It follows from this that the enterprises can firmly count on a definite total of the funds, depending upon the results of their activities.

We cannot fail to note one principled innovation, provided for by the conditions of this experiment. If an over-expenditure of the wage fund, allowed

in the base year, is excluded from that year's fund, which is natural, then the account in the base fund of the savings relative to the completed volume of operations marks considerable progress in creating the necessary conditions for stimulating highly productive labor using the Shchekin Method. Let's imagine that, beginning in the fourth quarter, 10 employees, by means of existing economies in the wage fund had supplementary payments established for them for combining occupations, expanding the service zones, and completing a large volume of operations, amounting to 30 percent of the wage rates. If the customary procedure for planning the wage fund were in effect, then the base fund would include nine wage rates (0.3 X 10 X 3). But in the ensuing year the supplementary payments established for the employees have to be paid out for 12 months, and for this purpose it is necessary to have in the fund means amounting to 36 wage rates (0.3 X 10 X 12). In order not to allow an over-expenditure of the wage fund, the following problem must be solved: either pay out the supplementary payments for one quarter, or reduce their amounts to one-fourth so as to fit them into nine wage rates, as accounted for in the base year. Both variants contradict the existing procedure, which has been retained under the conditions of the experiment: the supplementary payment can be eliminated or reduced only in case the operational indicator worsens. Therefore, the account of the relative savings of the wage fund, as obtained during the previous year, in the following year's fund constitutes a major step in improving the sources for paying out the wages deserved.

We have found a solution which increases the stability of the economic norms. In computing the funds, use is made of the increase of certain indicators: for the wage fund—the increase in normative (net) output, while in the garment industry of the Belorussian SSR Ministry of Light Industry—the normative cost of manufacture, and in the local industry of the Lithuanian SSR (except for artistic handicraft enterprises)—commodity output (in the Ministry of Heavy and Transport Machine Building and at enterprises of artistic handicrafts of the Lithuanian SSR Ministry of Local Industry the wage fund is computed according to the norms for the entire production volume); for the economic—incentives fund in the machine-building ministries—a lowering of the total outlays per ruble of commodity output, in the food and light industries—the growth of profits, and in local industry—the increase of profits. Such norms are relative—ly easy to calculate, which facilitates their sufficient justification and, consequently, their long life.

In order to increase stability, the economic norms do not take into account the wage fund of the non-industrial personnel and the unregistered staff; it is planned in absolute sums; both funds include the individual sums necessary for additional numbers of employees in connection with putting new production capacities into operation and sums being allocated from reserves.

Among the indicators for planning the wage fund and forming the economic-incentive fund there is none for the growth of labor productivity. This indicator is utilized (with the exception of the food and local industries) for evaluating the operational level of enterprises which cannot be lowered. The experience of agriculture has been applied here. If the planned and actual growth in labor productivity is lower than the average annual growth rate, as formed over the preceding five years, then the base wage fund or economic-incentives fund is lowered proportionately. In the local industry of the Lithuanian SSR the funds are reduced depending on the excess in the numerical limit of the workers.

The procedure set forth for planning the wage fund and forming the economic-incentive fund strengthens the motivation for adopting intensified plans. The fact of the matter is that the use for calculating the funds of data from the preceding year and norms for increasing the operational indicators creates a situation whereby enterprises and ministries ahead of time, prior to determining the plan for production volume, can calculate the dimensions of the funds suitable for them, proceding from the obligations taken upon themselves with respect to the growth of quantitative indicators and the improvement of qualitative indicators of economic activities. This is important for stepping up the stimulation of labor.

A general condition of the experiment on improving the mechanism of forming the sources for paying out bonuses in all five ministries is, as is also the case in awarding bonuses, increasing the importance of the indicator of product deliveries in accordance with the terms of contracts for forming the material-incentive fund. For violation of the contract obligations the penalties have been intensified from one to three percentage points of the fund's reduction for every percentage point of under-delivery. If the concluded contracts are all fully carried out, the fund is increased by 15 percent, whereas in the remaining industry this is done by only 10 percent. At the same time more reliable sources have been provided for such increases to the fund even so far as to make deductions from the profits and contribute them to them budget when there are insufficient above-plan profits. The change in the procedure for forming the economic-incentives fund will, undoubtedly, have a corresponding effect on the awarding of bonuses to employees.

There has been an expansion of the rights of the enterprises of the Ministry of the Electrical Equipment Industry with respect to utilization of the material-incentives fund. A portion of it, formed by means of incentive-type surcharges applied to the wholesale prices on products bearing the State Badge of Quality (and in the Ministry of Heavy and Transport Machine Building also on new, highly efficient products, corresponding to the best domestic and foreign models) is used by the enterprises in accordance with the estimated expenditure of the economic-incentives fund, as revised and approved by the labor group, i.e., not only for the targeted awarding of bonuses for creating and introducing new equipment. Analogous permission has been granted to enterprises of the Belorussian Ministry of Light Industry with regard to using funds coming into the material-incentives fund by means of incentive-type surcharges applied to the retail prices on new consumer goods of improved quality.

Enterprises of the Ministry of the Electrical Equipment Industry, in contrast to others which have been converted to the economic experiment, are permitted to form integrated economic-incentives funds. For this purpose, incentive-type funds regarding all the special systems of awarding bonuses are being channeled into a fund set up following the standard procedure. The intention of this lies in the significant expansion of an enterprise's rights to use funds which have been earmarked for special systems of awarding bonuses precisely along those lines which the labor group finds most feasible as applied to a specific situation.

In fact, let's take, for example, an enterprise where a separate section has been organized for manufacturing consumer goods, utilizing production wastes.

Are bonuses from the consumer fund really so special for workers in this section? Why then are the bonuses paid out for the basic results of economic activity? Or take. for example, the bonuses at the expense of applying surcharges to products in the highest quality category, which, according to the existing procedure, fall within the system of awarding bonuses for creating and introducing new equipment. Most of the workers turning out these products were not employed in their creation and introduction. However, they deservedly receive bonuses, since the manufacture of the highest-quality products requires of them a greater degree of occupational skill and a heightened responsibility. Now an enterprise has the opportunity to pay out bonuses in higher amounts for the completion of assigned tasks regarding the output of such products thanks to the use of funds from surcharges applied to prices. It should be noted that, at the beginning of the 1970's, certain associations of the Ministry of the Electrical Equipment Industry conducted an experiment on the formation of an integrated economic-incentives fund. At that time it amounted to the re-distribution of funds solely for new equipment among workers in production and science.

For enterprises which have been shifted onto the economic experiment, with the exception of the food industry, it has been provided that, in case the growth of wages exceeds that of labor productivity, an appropriate portion of the economic-incentives fund is reserved and used in the following year for economic incentives or is channeled during the current year into the fund for socio-cultural measures and housing construction. In connection with this, use is not made of the responsibility, introduced into industry beginning on 1 January 1984, for violations of the normative correlation between the growth of labor productivity and that of wages.

During the course of the experiment a test check-up is being run on a number of additional measures for the economic stimulation of work on improving production technology, as well as upgrading the quality of products being turned out and new ones. Moreover, this pertains to products not only of the production-engineering type but also to new consumer goods of improved quality. The Ministry of Heavy and Transport Machine Building and the Ministry of the Electrical Equipment Industry have been permitted to transfer funds from their own centralized bonus funds for new equipment to other ministries and departments for the purpose of awarding bonuses to employees of the enterprises within the departments under their jurisdiction. The transfer of funds is carried out for the completion on contract principles of joint projects with regard to the creation, mastery, and introduction of new equipment. Furthermore, enterprises of the Ministry of Heavy and Transport Machine Building and the Ministry of the Electrical Equipment Industry have been granted the right to approve, upon agreement with the customer (purchaser), additional amounts to be added to the wholesale prices in case of completion of the requirements agreed-upon with the customer with regard to improving the individual technical-economic indicators and other consumer characteristics of the products being delivered, as compared with the standards or engineering specifications, including those involving an increase in the service life of the items. Enterprises of the Ministry of Heavy and Transport Machine Building have been permitted, when they make changes in the assembly of machinery (equipment, instruments) upon the demands of the customer (purchaser) to approve, upon reaching agreement with them, appropriate additional amounts to be applied to the wholesale prices or discounts from them. The Belorussian SSR Ninistry of Light Industry has been granted the right to establish on the first

test batches of items wholesale and retail prices with limited terms of effectiveness to a total sum of 500,000 rubles, while the enterprises under this ministry can do so to the sum of up to 100,000 rubles. The Ministry of Heavy and Transport Fachine Building, the Ministry of the Electrical Equipment Industry, the Belorussian SSR Ministry of Light Industry, and the Lithuanian SSR Ministry of Local Industry are obliged, in case of a temporary worsening of the operational indicators of the enterprises during a period of mass assimilation of new, highly efficient equipment, to compensate them for the reduction in the wage fund and the economic-incentives fund at the expense of the appropriate centralized funds and ministerial reserves.

Furthermore, in order to strengthen the motivation of the enterprises under the jurisdiction of the Ministry of Heavy and Transport Machine Building, the Ministry of the Electrical Equipment Industry, the Ukrainian SSR Ministry of the Food Industry, and the Belorussian SSR Ministry of Light Industry to make fuller use of production wastes for turning out consumer goods, it has been provided that, in cases where the proportion of wastes in the total cost of the raw material and basic materials expended on the manufacture of the goods comprises less than 50 percent, contributions to the consumer fund made by means of deductions from profits received from the sale of such goods are to be made, taking into account the specific proportion of the wastes in the total cost of the expended raw material and other materials. This substantially changes the procedure according to which the consumer-goods fund is formed only in cases where the cost of the expended raw material and other materials comprises at least 50 percent.

The enumerated supplementary measures for stimulating labor are specified for enterprises in a centralized procedure. Now the managers of enterprises and labor groups are required to make the maximum use of the new opportunities of material incentives for the benefit of the cause. This presupposes the development of a complex of measures which must pursue a number of goals. In the first place, with the help of bonuses we must strengthen the motivation of employees in various categories to produce goods on the assigned products in a smooth fashion, the uninterrupted servicing of the basic production facility so that the enterprise can complete all its delivery contracts.

Under the present-day conditions it is extremely important that workers, designers, technologists, and other engineering and technical personnel be motivated to reduce the labor-intensiveness involved in manufacturing items, carrying out assigned tasks with fewer people, expanding the service zones and combining occupations, extending the brigade form of oganizing and stimulating labor, and of course, introducing new equipment and technology, as well as improving the organization of production and labor. Here, in stimulating labor, there ought to be an increase in the role played by additional payments and surcharges. As a result, there will be a speed-up in the growth of labor productivity and a reduction in the need for labor resources.

Increasing production efficiency is connected, to a large extent, with a broader introduction of the principles of cost accounting into the activities of workshops, sections, services, and particularly production brigades. Strengthening the dependence of bonuses on completing the cost-accounting indicators will faciliate the reduction of production costs, result in all-around savings of material resources, and a growth in profits.

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### MOSCOW'S PROGRAM TO REDUCE MANUAL LABOR DESCRIBED

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[Article by S. Karastelin, candidate of economic sciences: "From the Experience of Planning the Reduction of Manual Labor" under the rubric, "Labor Resources and Labor Productivity"]

[Text] The most important factor in increasing the effectiveness of social production, accelerating the growth of labor productivity, and improving the use of labor resources is the reduction of the amount of manual labor spent in production, and replacing manual labor with mechanized or automated labor. The systematic development of socialist social production is creating favorable conditions for solving the task of reducing the use of manual labor.

The Decree of the CPSU Central Committee and USSR Council of Ministers, "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Efficiency and Work Quality," stipulates that the five year plans for the economic and social development of the industrial ministries, associations and enterprises must establish tasks for reducing the use of manual labor. Planned assignments were approved for this purpose in the 11th Five Year Plan.

At the present time a certain amount of positive experience has been accumulated in the area of mechanization and automation of production, being carried out in conjunction with other labor-saving measures on the scale of entire regions -- in Moscow, Leningrad, and Chelyabinsk; in the Ukraine, in Lithuania and in Latvia. And nevertheless, the growth rates for mechanization and automation are still not high enough. The principal reason for this is the lack of a comprehensive approach to problem solving and to coordinating work on reducing manual labor in the ministries, departments and sectors of machine building which have been directed to provide industry with automatic equipment, with goods-handling equipment, with hand-held power tools, and with robot technology. The "Special-Purpose Comprehensive Program for Reducing the Use of Manual Labor in the Sectors of the National Economy of the USSR for the Period up to the Year 2000" (TsKPRT), being worked out in accordance with the decisions of the 26th CPSU Congress, should promote the elimination of these shortcomings. This program will be implemented at all levels -- at the republic level, at

economic regions, etc. The primary tasks of the program will be included in the five-year plans, and in the annual plans. First priority allocation of resources is envisaged for their implementation and the organization of scientific research, experimental design, planning-surveying and construction-installation work.

A necessary condition for successfully implementing TsKRPT is the accounting in it of the results of the development of the complex program for scientific-technical progress, the program for mechanization of goods-handling and warehouse work, and the program for establishing and introducing automatic remote handlers, which are being put together by the ministries and departments for the period up to the year 2000.

The TsKPRT should be worked out in two stages. At the first stage (1984) reporting (compilation of data) is being accomplished on manual labor; and, on the basis of the results received, measures are being defined for reducing the use of manual and hard physical labor. A preliminary draft program is being established. At the same time the requirement for the necessary equipment is determined by the enterprises themselves.

At the second stage (1985) the republics, the ministries and departments, and the enterprises must define the tasks for reducing the number of workers (including women) employed at manual and hard physical labor.

When work was being carried out on the first stage, it was necessary for the ministries to prepare a great deal of material for the subordinate enterprises and organizations, based on existing standard nationwide documents. The materials had to take into consideration sectorial production features in order to classify the manual and heavy physical labor, to compile data on them, and to define objectives according to which reporting was to be accomplished on these jobs.

For example, in the Ministry of Railways a program was to be developed for each section of the road; for each construction-installation and production enterprise subordinate to the railroad; for each plant, subway system, and territorial association for industrial rail transportation; and for each railroad, for each directorate of the Ministry of Railways, and for the ministry as a whole.

The preliminary versions of the program presented to the Ministry of Rail-ways were differentiated according to territorial profile, union republics, and for the RSFSR; in addition, economic regions were singled out, as well as the cities of Moscow and Leningrad and Leningrad Oblast.

In order to compile data on manual labor and to work out measures for reducing it, the following classifications were worked out in the Ministry: rail transportation facilities and enterprises; operations common to rail transportation facilities; types of repair, technical servicing and work in the various facilities; and workers' professions according to the services and facilities of the Ministry (This classification lists the title of a

worker's profession, a code for the degree of mechanization of operations, and a sector and nationwide code for professions).

In machine building, "Classifications of Technologica! Operations in Machine Building and Instrument Making" form the basis for branch classifications of kinds of production, kinds of work and manual operations; and a system has been established for coding the manual operations performed in the basic and auxiliary production processes at machine building enterprises.

In Minlegpishchemash [Ministry of Machine Building for the Light and Food Industry and Household Appliances], in addition to classifications for kinds of production processes, work and manual operations, a list of recommendations has been drawn up pertaining to materials handling equipment, technological equipment and rigs which can be used for mechanization of manual and hard physical labor.

In Glavmosavtotrans [Moscow Main Administration of Motor Transportation], a branch classification, "Labor-intensive Manual Operations," has been drawn up for the purpose of documenting manual labor; it was designed to codify the denominations of labor-intensive manual operations and the work and manufacturing processes to which they pertain. This classification contains the denominations and corresponding codes for 220-labor intensive manual operations in 51 kinds of work throughout 10 types of production processes.

For the enterprises of domestic and municipal services to the populace, and for trade and public catering in Moscow at which data sheets had not been previously compiled, a "Model List of Workers' Professions" has been drawn up, with a coded indicator for the degree to which work is mechanized.

However, compilation of data on manual labor was not supported everywhere by the required amount of method and normative documentation. As a result, the data on the scope of employment at manual and hard physical labor required to work out measures for the program were derived by the enterprises and even by individual ministries on the basis of statistical indicators or even by means of estimates. Such methods are not conducive to bringing to light all kinds of manual labor.

Significant difficulties also arise in working out territorial programs for reducing manual labor. The given questions are not given sufficiently thorough analysis from a method standpoint; statistical information on the use of manual labor is lacking, as are criteria for evaluating the quality of the established programs and the reserves brought to light on increasing production effectiveness; and finally, the lack of preparedness on the part of those conducting this work leads in a number of cases to a situation where the programs for reducing manual labor presented by the ministries and enterprises lack substantiation.

In this connection, the experience of organization of a territorial TsKPRT in the Moscow economy is rather interesting, since many of the abovementioned shortcomings were avoided in working out that program.

In terms of its structure, the economy of the largest industrial, transportation, scientific and cultural center of our country represents in minature the national economy of the USSR. Enormous resources of highly-skilled manpower are concentrated in Moscow. The city's population is growing constantly and already exceeds 8,000,000 people. Nevertheless a need exists for a significant amount of additional labor resources. This is brought about by the fact that the volume of industrial production and construction is steadily increasing, while transportation and the public service sector are enjoying ever greater development. In addition, the size of the Moscow populace which is no longer capable of working is constantly growing as well.

The problem of supplying the capital with labor resources makes it necessary to increase the effectiveness of utilization of existing manpower, first and foremost by releasing those workers who are employed at manual or hard physical labor.

Of the total number of Moscow's industrial production workers, the proportion employed at manual labor amounted to 43.5 per cent in 1975; 41.1 in 1979, and 39.5 per cent in 1982. At the same time, 84 per cent of the total number of such workers are employed in loading and unloading operations and in moving freight by manual methods. In 1982, 68.1 per cent of the auxiliary workers were employed in such jobs.

According to estimates, more than 60 per cent of those employed in construction organizations in the city are occupied at manual labor, and at a number of the main administrations and other city administrations associated with serving the populace, the number is 80 per cent and then some. The data cited testifies to the fact that there are a significant reserves in Moscow's economy for improving the use of manpower.

The Moscow Institute for Economic Problems of the Comprehensive Development of the National Economy of the city of Moscow [IEP] is exercising scientific and method control over developing the Special-Purpose Program for Reducing the Use of Manual Labor. The program is being worked out on both a branch and a territorial profile on the basis of the "Methodical and Organizational Rules for Developing the Special-Purpose Comprehensive Program for Reducing the Use of Manual Labor in the Economy of the City of Moscow for 1986-1990 and the Period up to the Year 2000," approved by Mosgorplan [Moscow City Planning Commission] in 1983. This program differs somewhat from the nation-wide method.

In Moscow it is recommended that the enterprises and organizations developing TsKPRT for the Period up to the Year 2000 include:

in industry--enterprises of union and republic subordination with more than 500 workers, and also industrial enterprises of the Moscow gorispolkom with more than 200 workers;

in construction--trusts, combines and construction-installation administrations;

in communications—the Central Telegraph; to the Administration of the Moscow City Telephone Exchange; the Moscow Post Office, and the International Post Office;

in transportation—the motor combines and associations, taxicab, bus and trolley fleets, and to the streetcar depots;

in trade and public catering--trusts, combines, trade organizations, associations, and fruit and vegetable offices (bases);

in housing and municipal services—to the rayon housing administrations production housing repair associations, trusts, repair and construction administrations and hotel complexes;

in domestic and municipal services to the populace--production associations, and associations, trusts and comines;

and in the city's civil engineering system--trusts, associations and rayon administration of roads and highways and improvements.

The remaining enterprises and organizations are compiling programs only to the year 1990. All enterprises and organizations, departmental subordination notwithstanding, are compiling reports (data) on manual labor.

Programs which have been worked out at the enterprises are sent to the rayon labor department, and also to the appropriate ministry or department. Rayispolkoms summarize the TsKPRT's of the rayon's enterprises and organizations and present a preliminary draft of the rayon program to the Labor Administration of the Moscow gorispolkom for consolidation and analysis of the indicators for the city as a whole. Union and republic ministries and departments, and main administrations and administrations of the Moscow gorispolkom present their programs to the Planning Commission of the ispolkom of the Moscow Soviet.

The Moscow Institute for Economic Problems, along with the departments of the Moscow City Planning Commission and the scientific-industrial association of the "Moskva" ASU [Automated Control System] are analyzing and processing the materials received, consolidating the indicators of the special-purpose programs according to ministries and departments, according to the branches of the Moscow economy (industry, construction, transportation, the services sphere and the city's engineering system), and for the city as a whole, and preparing a preliminary draft of the special-purpose comprehensive program for reducing the use of manual labor in the branches of the Moscow economy for the period up to the year 2000.

Such a system for working out the TsKPRT provides the required control on the part of planning, soviet and party organs over the pace of the work in the localities; over observing the deadlines for presenting the initial materials; and over analysis of their quality and their conformance to the stated requirements.

The nationwide method envisages working out the TsKPRT only for the primary activity of a ministry (department); that is, an industrial ministry will compile a program only for the subordinate industrial enterprises; construction ministries, for the construction organizations; ministries for municipal services to the populace, for public utilities; and so on. It would appear that such an approach would not promote a complete, comprehensive solution of the problem. After all, there are industrial and construction enterprises, and transportation and supply organizations subordinate to the ministry of municipal services; the industrial ministry also has construction and transportation organizations; and the construction ministry has industrial enterprises and transportation organizations. Thus, for a significant portion of the enterprises and organizations of various branches of the national economy no program will be worked out, and the effect on the realization of the entire TsKPRT will be significantly lower than it might have been with a comprehensive approach to the given problem.

The methodology utilized in working out a program for the Moscow economy envisages that the union and republic departments, and the facilities of Mosgorispolkom will work out a TsKPRT not only for the basic but also for other types of activity. For example, Minrechflot [Ministry of the River Fleet] RSFSR and Glavmosavtotrans are compiling a program not only for transportation (the basic activity), but also for the industrial enterprises.

The development of a preliminary draft TsKPRT in the branches of Moscow's economy will be completed by the time the draft plan for the comprehensive economic and social development of Moscow for the years 1986-1990 has begun to be drawn up; therefore, the assignment for reduction of the use of manual labor and the expenditures required for these purposes will be tied in with the resources and capital investments allocated in the plan.

During the development of the preliminary draft TsKPRT for the Moscow economy a number of problems sprang up of an organizational and method character.

In certain ministries and departments there are shortcomings in organizing work on compiling data (reports) on manual jobs. Determining the number of workers employed at manual and hard physical labor is the initial and the most important stage in developing the program. The ministries and departments should have compiled branch recommendations for data compiling based on branch and all-union methodology documents. However, this work was not carried out everywhere, and the methods of Goskomtrud [State Committee for Labor and Social Problems] and Gosplan USSR were used in the enterprises; but these methods do not take into consideration the special

features of this or tht branch. Not all ministries compiled lists of operations which should be mechanized in first priority; there were no branch classifications of kinds of production, work and operations; nor were branch recommendations worked out for use of one kind of equipment or another which would increase the level of labor mechanization. In a number of instances the classifications of the kinds of production, work and operations which were compiled simply were not reproduced in sufficient quantity; therefore the enterprises did not and cannot accurately code the kinds of production and work.

All of these shortcomings not only detract from the quality of the compilation of the programs, they also drag out the terms for their development.

Another important question is determining the completion dates of the programs. In the nationwide method, uniform terms have been established both for ministries (departments) and for territories (republics, Moscow and Leningrad). As a result, the organizations which are working out programs for the republics, for Moscow and Leningrad, were placed in a difficult position, inasmuch as there had practically no time for summarizing and analyzing the programs of the enterprises and organizations situated on their territories, but subordinate to union or republic ministries. Apparently, the periods for developing the TsKPRT should be differentiated in the following sequence: enterprises (organizations)—ministries (departments)—republics, Moscow and Leningrad.

It appears to be expedient even at the stage of the preliminary draft to work out a program with allocation of measures for the years of the 12th Five Year Plan. It was just such a method of posing the problem that permitted preparation of a draft program for the Moscow economy on a level which allowed it to be examined in combination with the plan for the 12th Five Year Plan.

The most significant methodical problem is the lack of recommendations for working out branch and territorial programs for reducing the use of manual labor. In terms of the composition of the materials and the demands made on them they should differ significantly from the programs of the enterprises. Special forms should be provided in branch recommendations, the completion of which would permit the local organs to implement effective control over ensuring conformity of the indicators for the number of workers and capital investments for implementing the program to the limits for the number of workers and capital investments defined in the Basic Directions of Economic and Social Development for 1986-1990 and for the Period up to the year 2000.

From the total volume of capital investments directed toward implementing measures for TsKPRT, it would be sensible to allocate funds for the

<sup>1</sup> The nationwide method recommends working out the TsKPRT at the stage of the preliminary draft for the 12th Five Year Plan as a whole, without breaking it down by year.

development of production capacities which would ensure the manufacturing of special technological equipment for one's own needs.

In recommendations for establishing branch TsKPRT it would appear to be sensible to shed more light on questions connected with the indicators for the economic effectiveness of one measure or another.

It is also necessary to develop for the branches of the national economy a list of broad groups of equipment, which would permit tying in with the plan the proposals of the enterprises and ministries on reducing the use of manual labor.

For example, in Moscow's TsKPRT the most advanced forms of machine tools and special equipment are singled out in the standard equipment of industry, including mechanized flow lines, conveyor flow lines, automatic and rotary lines, flexible production modules (cells), flexible production complexes, industrial robots and remote handling equipment, and the like.

In addition, it is fitting to single out separately standard equipment for handling goods, for transportation and warehouse work. This includes such broad groups of equipment as: cranes; transporters; freight elevators; complexes of mechanized and automated equipment for warehouses; standard hoists; loaders, tractors, stackers, electric stackers; electric carts and motor carts; freight dollies and so on. It is also sensible to examine as a separate category the standard equipment for cleaning the area and the premises. Non-standard equipment for mechanization of goods handling, loading-unloading and warehouse work can be divided into groups as follows: robots, remote handling equipment, tilting cradles, pushers, storage devices, hand trucks, rotating and lifting tables, leveling platforms, etc.

According to the experience of the development of the special-purpose program for mechanization of manual labor in Moscow's industry for 1981-1990 such a grouping of means of mechanization permits not only determining with sufficient accuracy the need for them by ministry, it also support reporting these data by branches of the economy and for the city as a whole.

It would be expedient, as a criterion, to indicate, by branches of the economy, the expenditures for the introduction of measures for new equipment (if only approximate) per worker released. This will permit selecting the most effective measures from among the methodical recommendations, and is all the more important, because at the present time such expenditures are increasing steadily.

If they possessed only approximate, tentative data on expenditures in the separate branches of the national economy, the ministries and territorial planning organs would be able to select those measures which provide for maximum release of workers for other work, with minimum expenditures for the measures carried out.

Measures for compiling territorial TsKPRT's should also address questions of assembling materials from the programs of the ministries according to branches of the national economy and regions. For example, in connection with the fact that the Moscow economy is represented by enterprises subordinate to the union, to the republic and to the city, the TsKPRT for Moscow is developed in several versions. First, according to branches of the national economy, singling out by branch of the national economy the ministries and departments subordinate to the union, to the republic and to the Moscow gorispolkom as a whole. At the same time the main administrations and other administrations of the Moscow gorispolkom have dual subordination, and are part of the programs of the union and republic ministries and departments. Secondly, according to the Moscow gorispolkom, with identification of assignments and indicators according to main administration and other administrations.

Such a system provides an opportunity for comparison of the program's tasks with the planning forms of the Basic Directions for the Economic and Social Development of Moscow for the Period up to the year 2000.

The recommendations must also resolve the problem of the assigning one ministry (department) or another to a certain branch of the national economy in those cases when its activity has several directions (for example, industry and construction).

The nationwide method for developing the TsKPRT for the period up to the year 2000 (as opposed to the plans for the 11th Five Year Plan) stipulates determining the number of workers employed at manual labor, taking into consideration those workers who are employed at adjusting and repairing equipment (according to the methodology of the USSR Central Statistical Administration [TsSU], code 5).

Analysis of programs received from the ministries indicates that assigning all this category to workers employed at manual labor is not always correct.

One of the main tasks of the program is maximum reduction of low-skilled, unattractive labor; that is, those work positions which are hard to fill at the present time and at which there is the most significant turnover of workers. However, the professions of set-up man and equipment repairman are sufficiently prestigious and among the most highly-skilled professions and require a high degree of professional training. For example, in 1982, at Moscow machine building and metal working enterprises, the proportion of workers with the highest skill levels (4, 5 and 6) among the set-up men for automatic lines and metal-working machine tools and automatic equipment amounted to 90.1 per cent of the total; among other set-up men-94.3 per cent and among repairmen-66.7 per cent machine-tool operators.

Another task of the program is mechanization, primarily of those operations for which it will have the greatest effect for the least amount of capital investment. Mechanization of the work of set-up men and equipment repairmen can yield the least effect, since the mechanization of such work is as a

rule already at an extremely high level; and a significant reduction in the number of workers in these professions is possible only with significant capital investments, inasmuch as it requires introduction of new labor-saving technology and manufacture of more sophisticated equipment which would permit utilizing a labor-saving system of repair and setup. Production of such equipment entails reorganizing the work of machine building in general and machine-tool building in particular; and in order to do this, a great deal of resources and extended periods of time are required.

Including the workers of the given professions in the number of those employed at manual labor also leads to the growth of absolute and relative indicators of the number of workers employed at manual labor. At the same time, the higher the proportion of automatic and semiautomatic as well as special equipment which requires a significant number of service workers, the higher the proportion of workers employed at manual labor.

The introduction of new, advanced equipment under conditions of scientific-technical progress quite frequently leads not to reduction but to growth of the number of workers employed in servicing the equipment; that is, those workers who, according to the recommendations, should be counted among those employed at manual labor. In this connection, obviously, when working out the program one should not assign all jobs which are performed manually in the set-up and repair of machinery and mechanisms to manual labor; only those which are subject to first-priority mechanization, in accordance with the list of professions coordinated by the ministries with TsSU USSR.

It also became clear, when compiling the preliminary draft program, that it is necessary to tie in more closely the statistical forms of accounting used. For example, measures for reducing the use of manual labor should be worked out on the basis of reports (compilation of data) on manual work. However, in the nationwide method, the form "Composite List of Measures for Reduction of Manual Labor at Enterprises" (2-TsKPRT) is not at all tied in with "Data of the Report on Manual Labor" (Form 2-U). On Form 2-TsKPRT it would be proper to introduce for each measure additional codes for the kinds of production processes (the place at which the measures were introduced), and codes for the professions of the workers employed at manual labor, for which the given measures are applied. This would permit implementing control over the mechanization of work for the most popular working professions, the labor of which should be mechanized in first priority.

Nor is such an important part of the program as "The Requirement for Equipment, Raw Material and Supplies, and Construction-Installation Work for Implementing Measures of the Program" (Form 3-TsKPRT) tied in with Form 2-TsKPRT. On Form 3-TsKPRT, aside from the equipment code, it is also necessary to show, by type of equipment: from Form 2-TsKPRT--the code for the measures for whose implementation the given equipment will be used; and from Form 4-TsKPRT ("Classification of Expenditures for Implementing Measures of the Program According to Sources of Financing")--the code for the kind of expenditure (i.e., state capital investments; major repairs; united fund for development of science and technology, etc.).

In addition, on Form 2-TsKPRT, for each measure it should show the pay-off period of the capital investments: comparison of that with the normative indicator can serve as an additional criterion when selecting the most effective measures of the program.

Another significant shortcoming in the method of compiling the program is the fact that, in spite of the significant number of indicators used in it, they do not completely characterize the most important, end results of the development of the program and are not tied in with existing planning documentation. In order to eliminate that shortcoming, it would appear to be sensible to introduce the following additional indicators in the "Basic Indicators of the Special-Purpose Comprehensive Program for Reducing the Use of Manual Labor" (Form 8-TsKPRT):

- 1. Limit of Total Number of Workers. Changing this indicator will permit taking into consideration the trends in formation of the total number of workers.
- 2. Absolute Reduction of the Number of Workers Employed at Manual Labor. With the aid of the given indicator, it will be possible to define changes in the overall limit of the number, and the reduced need of the ministries and departments for additional manpower.
- 3. Growth of Labor Productivity as a Result of Implementing Measures of the Program for Reducing the Use of Manual Labor. This indicator will permit tying in the limits in the number of workers and the planned tasks for growth of labor productivity.
- 4. Coefficient of Replacement of Equipment. Absolute release of workers presently employed at manual labor is necessary for growth in this indicator.
- 5. Limit of Capital Investments. With the aid of this indicator additional control may be implemented over the distribution of expenditures for introducing measures of the program according to sources of financing.
- 6. Reduction of Production Costs as a Result of Carrying out Measures of the Program. This indicator should be in addition to the planning indicator for reduction of production costs for manufactured products.

In a number of programs presented at the present time by the ministries to Mosgorplan, problems of reducing the use of manual labor are being solved primarily by virtue of state capital investments, to include those allocated for acquisition of imported equipment, with is very expensive but not very effective from the point of view of mechanization of labor. Obviously, the need for economy in all kinds of resources and a comprehensive increase in the effectiveness of all social production requires developing such measures

in the program which will provide the maximum effect at the lowest cost; at the same time, these measures should be carried out basically at the expense of the enterprises themselves, without bringing in additional significant capital investments.

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LABOR

## LEGAL ROLE OF LABOR IN MANAGEMENT PARTICIPATION EXAMINED

Protection of Socialist Property

Moscow KHOZYAYSTVO I PRAVO in Russian No 4, Apr 84 pp 19-24

[Article by Doctor of Legal Sciences S. Mikhaylin under the heading "Labor Collectives and the Law"; "Powers of Labor Collectives to Ensure the Protection of Socialist Property: Commentary on Article 8 (Part I) of the 'USSR Law on Labor Collectives and Increasing Their Role in the Management of Enterprises, Institutions and Organizations'"; passages rendered in all capital letters printed in boldface in source]

[Text] Securing legislatively the powers of the labor collective to ensure the protection of socialist property is aimed at further developing the initiative of the workers, at increasing their role in strengthening the country's economy. According to Article 8 of the "USSR Law on Labor Collectives and Increasing Their Role in the Management of Enterprises, Institutions and Organizations labor collectives CARRY OUT STEPS TO ENSURE THE PROTECTION OF SOCIALIST PROPERTY AND ITS AUGMENTATION, TO COMBAT MISMANAGEMENT AND SQUANDERING THE NATIONAL WEALTH, TO PREVENT THEFTS OF STATE AND PUBLIC PROPERTY. By becoming an object of constant concern for the labor collective, activity involving the protection of socialist property acquires a purposeful character encompassing all aspects of the work of enterprises, institutions and organizations (subsequently referred to as "enterprises").

Ensuring the protection of socialist property can be understood as a system of organizational, economic, legal, technical, educational and other measures carried out with the goal of bringing order to the process of managing material and financial resources and, on that basis, forestalling mismanagement, various kinds of losses and nonproductive expenditures, thefts of state and public property, and other mercenary abuses. Proceeding from this, enterprises must work out long-range plans of action. Along with other steps, they should anticipate steps to ensure:

- a) appropriate organization and management of warehousing and weighingmeasuring, strict adherence to the rules for storing material goods;
  - b) improving the use of material resources:
- c) proper recording of property at all stages of its movement in the course of production-economic use;
- d) effective protection of property, with the primary goal of preventing theft, spoilage, damage or destruction of property items;

e) a high level of organization of material and financial resources use monitoring.

Steps aimed at ensuring the protection of socialist property need discussion at labor collective meetings (conferences) and corresponding approval.

The implementation of measures to protect socialist property is associated first of all with active efforts by the administration and public organizations which, under Article 19 of the law, exercise the powers of the labor collectives between meetings. The enterprise administration, in the persons of leaders of its structural subdivisions and other officials, must ensure the necessary level of administration of material and financial resources, an active struggle for economizing and thrift in conformity with their functions.

Within the structural subdivisions, we delineate economic services called upon to influence the processes of material and financial resources management and, consequently, the prevention of property losses and unnecessary expenditures. Their role is especially important in improving setting rates for expenditures of raw and other materials, fuel and other types of material resources. The functions connected with ensuring the protection of socialist property are most distinct in the activity of accounting, technical control, material-technical supply and marketing, and legal services.

The accounting office stands at the sources of shaping the basic indicators of enterprise activity and participates directly in solving problems connected with property management. It is therefore invested with monitoring the protection of material values and monetary funds at all stages of movement in the production-economic use process. Under the "Chief Accounting Office Regulations," the accounting office monitors, in particular, the proper organization of the receipt and release of finished products and other types of material-commodity values, the substantiation of write-offs of fixed assets, inexpensive and rapidly depreciating items, breakage, defects and other losses; takes steps to forestall shortages, embezzlement and theft, illegal expenditures of material and monetary resources; draws up materials detailing shortages and thefts.

The "Standard Regulations on Industrial Enterprise (Association) Technical Control Departments (Administration)" anticipates that the primary tasks of the OTK [technical control departments] will be to prevent the release (delivery) by the enterprise (association) of output not conforming to established specifications, as well as to strengthen production discipline and increase the responsibility of all production links for the quality of products released. The enterprise technical control department monitors the quality of output being released, its conformity to state standards, specifications or time norms, checks the condition of monitoring and measuring devices and the quality of packing and packaging, and also implements other measures facilitating the protection of property.

The material-technical supply service defines actual enterprise requirements for material resources, organizes their acquisition in the established amounts and required quality, and monitors their proper expenditure.

The legal subdivision, under the "General Regulations on the Legal Department (Bureau), Chief (Senior) Legal Consultant and Legal Consultant," <sup>3</sup> ensures legal means for protecting socialist property, improving product quality, and it also uses legal means to strengthen cost accounting and to combat mismanagement.<sup>4</sup>

One important enterprise administration task is to make better use of the opportunities provided by the brigade form of labor organization. The CPSU Central Committee decree "On Further Developing and Improving the Effectiveness of the Brigade Form of Labor Organization and Stimulation in Industry" notes that labor productivity increases faster, working time losses are reduced, and material and labor resources are expended more economically in multipurpose and integral-process brigades working under a single job authorization with payment based on end results.

The enterprise administration has sufficient rights and opportunities for exercising the power of the labor collective more fully.

Public organizations play a large role in this area. Many opportunities are available to trade-union organizations in the prevention of mismanagement, extravagance and violations of labor and state discipline. They not only participate in working out and implementing measures aimed at strengthening the property base of the enterprises and at augmenting socialist property, but are also granted the right to monitor progress in carrying out the production program, the quality of the output, and the proper use of material, labor and financial resources.

The Komsomol organizations ensure the active participation of young people in the mass movement to save material resources. Shaping a caring, ownership attitude towards the public wealth in young men and women is an essential element in their educational work.

Jointly with the elected organs of public organizations, the administration must facilitate the development of active efforts by creative and other organizations of the workers (scientific-technical societies, the All-Union Society of Inventors and Efficiency Specialists, and public technological and economic buros laboratories, and so on). The economic analysis buros whose focus of attention is the search for ways to eliminate losses of material and financial resources, and so on, have assumed particular importance. The fight against nonproductive expenditures and losses must become a daily concern of public monitoring groups and posts.

Labor collectives are capable of actively using all the various forms of work for thrift and economy. One meriting attention is the experience of the Kiev experimental footwear production association, which created a staff headed by the association director, for educational work and tutelage. The

staff consists of representatives of public organizations, the various commissions active in the association, and others. The well thought-out plan and skillful work organization of the staff ensured its good results.

Evaluating the status and results of enterprise administration and tradeunion committee activity in exercising the powers of the labor collective is of essential importance. Questions of ensuring the protection of socialist property must be reviewed regularly at the labor collective general meeting (conference). Use of this form of exercising its powers helps eliminate the shortcomings noted in the CPSU Central Committee, USSR Council of Ministers and AUCCTU decree of 28 July 1983 "On Strengthening Work to Strengthen Socialist Labor Discipline."8

The results of enterprise production-economic activity are periodically reviewed by budget [balance] commissions, one of their tasks being to explain the actual reasons for losses, production defects and other violations in the enterprise property sphere, another being to develop proposals to eliminate them. Many branches of the national economy have created permanent commissions to analyze nonproduction expenses (Ministry of Tractor and Agricultural Machinebuilding), to review and prevent non-production expenses (USSR Ministry of Coal Industry). Services to study the causes of and conditions facilitating the generation of losses, shortages and theft and to develop steps to prevent them have been created at many enterprises of the USSR Ministry of Light Industry.

Enterprises are also creating permanent commissions to determine when equipment, stock and other property is unsuitable for further use in the national economy, when rebuilding is impossible or ineffective, and also to draw up, when necessary, the documentation necessary to write off such assets from the balances. Chaired by the enterprise chief engineer, they establish the reasons necessitating writing off this property (wear, abnormal operating conditions, and so on), which are reflected in the write-off documents.

An important role in establishing the reasons for losses and in preparing proposals to eliminate them is given to the permanent inventorying commissions created under the "Basic Regulations on Inventorying Fixed Assets, Commodity-Material Values, Monetary Assets and Accounts."10 They are obligated to reflect, on the basis of working commission materials, their own conclusions and proposals based on inventorying results in their minutes, which provide detailed information on the reasons and those to blame for shortages and losses, on what steps have been taken concerning the guilty persons, and so on.

In connection with the conducting in the 11th Five-Year Plan of an All-Union Review of the Effectiveness With Which Raw and Other Materials and Fuel-Energy Resources Are Used, each labor collective is creating review commissions which will include representatives of trade-union and komsomol organizations, the public monitoring system, specialists, and leading production workers and innovators. In conducting inspections and checks

of the status of recording and monitoring the use of material value and reducing losses, jointly with trade-union and economic agencies, the public monitoring system and the "Komsomol Searchlight," the commissions work out and make proposals on eliminating the violations revealed and disseminating leading experience.

The labor collective also uses organizational forms of work such as fulltime commissions to ensure the protection of socialist property, commissions (groups) to check the protection of state property or councils (commissions) to protect state property, and so forth.

The law anticipates that labor collectives will have the right not only to MAKE SUGGESTIONS, but also to TAKE STEPS AT ELIMINATING THE CUASES OF LOSSES AND PRODUCTION DEFECTS. This is an important aspect of labor collective powers to ensure the protection of socialist property. The necessary efforts here must be directed at organizing strict, constant monitoring of the prompt implementation of steps to eliminate specific causes of losses and production defects by enterprise structural subdivisions, officials and other workers.

The creation in the labor collective of an atmosphere of the inevitability of responsibility, of strict demandingness, is an effective method of combatting mismanagement. This is graphically borne out by the experience of enterprises in which serious attention has been paid to these questions. 11

However, the opportunities for helping prevent and eliminate law violations in the enterprise property sphere had, until recently, been far from adquately used. This especially applied to reimbursement for property losses incurred by the national economy as a result of mismanagement and other violations of the law. The press reported instances testifying to the fact that many enterprises had not been taking steps to reimburse such losses. Thus, according to data from procurator's office agencies, 74 percent of the losses caused by avarice and negligence were written off to production outlays in the USSR Ministry of Procurement system, 67 percent in the USSR Ministry of Construction system and 58 percent in the USSR Ministry of Food Industry system. 12 A large number of petty thieves go unpunished, 13 and only an insignificant portion of the losses due to production defects is reimbursed.

The law, in anticipating the right to POSE QUESTIONS OF BRINGING CHARGES, UNDER THE ESTABLISHED PROCEDURE, AGAINST WORKERS GUILTY OF VIOLATING THE LEGISLATION ON PROTECTING SOCIALIST PROPERTY OR OF RELEASING POOR-QUALITY, SUBSTANDARD OUTPUT, orients labor collectives towards waging a resolute struggle for a thrifty attitude towards the national wealth, against thefts and shortages of socialist property, by ensuring the fuller use of legal accountability.

Material means of influence play an important role in ensuring the protection of socialist property. In using this type of accountability, labor

collectives are governed by the "Regulation on the Material Responsibility of Workers and Employees for Damage Caused an Enterprise, Institution or Organization." The terms and limits of material responsibility for damage and the procedure for recompensing it are established with a view towards ensuring an attitude of thrift towards socialist property among workers and employees. In posing the question of holding workers materially responsible, the labor collective proceeds from the fact that workers and employees bear such responsibility only given an actual, direct loss. A worker cannot be held materially responsible for a loss which arises as a result of normal production-economic risk.

A loss is recompensed whether the charges are disciplinary, administrative or criminal involving an action (lack of action) which causes a loss to the enterprise. The supplement to Article 49 of the Basic Labor Legislation, introduced by the USSR Supreme Soviet Presidium Ukase of 12 August 1983 and changing the procedure for recompensing losses to a limit of one-third of the average monthly wage, is of important significance. This reimbursement is now made on instructions from the enterprise administration by withholding from the worker's wages; this must be done no later than two weeks from the day the loss caused by the worker is discovered. Written worker consent to this is not required. The withholding is done by the accounting office on orders from the administration. In other cases, the loss is reimbursed by the administration's filing suit in a rayon (city) people's court.

The regulations also establish a procedure for recompensing losses to the enterprise through the fault of enterprise leaders and their deputies. Such losses are recompensed on the instructions of a superior agency. Enterprise leaders and their deputies are fined for material loss judicially through suits brought by a superior agency or the procurator's office.

In organizing work to combat petty thefts of socialist property, the labor collective uses its right to pose questions of bringing charges under the procedure established by the RSFSR Supreme Soviet Presidium Ukase of 13 December 1977 "On Administrative Responsibility for Petty Theft of State or Public Property" in the 3 December 1982 Edition 16 and the RSFSR Supreme Soviet Presidium Decree of 13 December 1977 "On the Procedure for Applying the RSFSR Supreme Sovicet Presidium Ukase 'On Administrative Responsibility for Petty Theft of State or Public Property'" in the 3 December 1982 edition of the Ukase.17 In accordance with the documents cited, the enterprise administration sends a deposition and other materials on a first-time petty theft of state or public property to a public organization, the labor collective or a comrades court for review, with consideration of the nature of the violation of the law and the personality of the law-breaker, within 24 hours, so that public pressure can be brought to bear; the materials may be sent to a people's court so that administrative charges can be brought. 18 If a second petty theft occurs within one year, the deposition and other materials are sent within 24 hours to a people's court for administrative charges.

If thefts, waste or shortages or public property are established, the enterprise administration proceeds from the fact that, under Article 37(b) of the "Regulations on Accounting Reports and Balances," materials indicating that shortages and losses involve malfeasance are to be transmitted to investigative agencies within five days after the shortage or loss is established. The procedure and requirements for drawing up materials for transmittal to investigative agencies are generally established by the USSR Procurator's Office, together with the organizations concerned.19

At the same time that the materials are sent to investigative agencies, civil suit is brought to recover the amount of the shortages and losses. In this regard, the labor collective must take into account the fact that administration activity is not restricted to bringing the suit. This is only the initial stage in implementing steps to recompense loss to the enterprise. The administration ensures the participation of an official enterprise representative at all stages of the case and actual execution of the court's sentence as applicable to recompensing the loss or judgement. At the present stage, socialist property is most often protected by educating Soviet people in a spirit of thrift towards the national wealth. This pattern is a result of the increased role of the labor collectives.

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Personnel Training Placement

Moscow KHOZYAYSTVO I PRAVO in Russian No 5, May 84 pp 36-39

[Article by M. Pankin, sector chief, legal department, USSR State Committee for Labor and Social Problems, under the heading "Labor Collectives and the Law": "Powers of Labor Collectives to Train, Place and Improve the Skills of Personnel: Commentary on Article 13 of the 'USSR Law on Labor Collectives and Increasing Their Role in the Management of Enterprises, Institutions and Organizations'; passages rendered in all capital letters printed in boldface in source]

[Text] The scientific-technical revolution and the universal introduction of scientific and technical achievements into production have fundamentally changed the character of labor, providing it with a high degree of equipment. The new and more complex functions of workers in all spheres of production life have increased the importance of the "human factor" and the necessity for skilled leader and production personnel. A widely developed system of personnel training, retraining and skill improvement has been created and is in operation in the country.

In 1982 alone, 2 million specialists with a higher or secondary special education and 2.5 million young graduates of vocational-technical academic institutions entered our national economy; 45 million people have been trained in new occupations or improved their skills (IZVESTIYA, 22 January 1983).

Now, when major and to a large extent new tasks have been set us in all areas of economic and social development, as was noted at the November (1982) CPSU Central Committee Plenum, success in carrying them out also depends on personnel policy. We need to place personnel correctly, so that politically mature, competent, enterprising people possessing organizational abilities and a sense of the new, which is essential these days to the successful directing of a modern production facility, are available in the decisive sectors.

Under Article 13 of the USSR Law on Labor Collectives, the latter, in particular, PARTICIPATE IN DISCUSSING AND DECIDING QUESTIONS OF PERSONNEL TRAINING, PLACEMENT AND EFFECTIVE USE, ENSURING THE STABILITY OF COLLECTIVES, PERFECTING THE STRUCTURE OF ENTERPRISES, INSTITUTIONS AND ORGANIZATIONS; THEY RECOMMEND COLLECTIVE MEMBERS WITH DISTINGUISHED LABOR RECORDS FOR A HIGHER RATE CATEGORY (CLASS) OR FOR ADVANCEMENT.

The exercising of these powers is associated with implementing a complex of measures, beginning with planning personnel work, including that with new arrivals at the enterprise.

Plans for work with personnel must correspond to specific tasks set a given enterprise for a corresponding period. The labor collective is, of course, not indifferent to their content. The personnel training plans are therefore discussed in detail in the collectives of many enterprises. Proposals made are taken into account when working out the final version. With the consideration of production requirements, the enterprises carries out individual, course-study other training of workers in second occupations to prepare them for work under brigade conditions, as well as work on combining occupations, systematic improvement, deepening and broadening worker professional knowledge and skills, training them in leading work methods.

The role of the labor collectives in monitoring the organization and conduct of this work is quite large. Thus, the collective has the right to an administration accounting of the number of those being trained, the quality of the training and the tutor-instructor staff. In this regard, the consideration is that of enlisting as instructors highly skilled workers and as teachers of theoretical training engineering-technical workers, specialists with a higher or secondary special education and at least three years of work experience in that specialty.

Included among the questions connected with personnel training which labor collectives are entitled to discuss and participate in resolving are individual problems of raising the general educational level of workers, including training in secondary general educational schools, higher and secondary special academic institutions, while on the job.

It is obvious that, regardless of realization of the benefits defined by the law, the overall working time balance necessary to the collective to implement the production plan is retained. This places greater responsibility on all members of the collective. They are entitled to know how students' use of the free time and holidays granted them is being monitored. When necessary, the collective can listen to a student.

Enterprises in industry and agriculture and construction and other organizations are granted the right to direct working young people to VUZ's and tekhnikums for training (night schools) and to pay them stipends using their own funds. The responsibility for selecting recipients of plant stipends rests not only on the administration and enterprise public organizations, but also on labor collectives as whole. It is, in fact, the general meetings (conferences) which approve the candidacy of young production leaders, of the best-trained and most capable workers, for assignment to training in higher and secondary special academic institutions, with stipends to be paid by enterprises.

Labor collectives are called upon to display particlar concern for educating young people, for preparing young men and women for active, socially useful activity. Article 13 of the USSR Law anticipates that labor collectives WILL, WITH THE PARTICIPATION OF KOMSOMOL ORGANIZATIONS, EXAMINE QUESTIONS OF THE EDUCATION OF WORKING YOUNG PEOPLE, THEIR OCCUPATIONAL TRAINING, SECURING IN A COLLECTIVE, AND WILL MAKE APPROPRIATE SUGGESTIONS AND FACILITATE IMPROVING THE LABOR EDUCATION AND OCCUPATIONAL ORIENTATION OF STUDENTS IN SPONSORED SCHOOLS.

Even prior to adoption of the USSR Law on Labor Collectives, Komsomol organizations were working in close interaction with other public organizations to educating young people. But now, the role of labor collectives in this work has been increased in fact. A by no means complete list of lines of their activity would include: organizing the education of young people in a spirit of respect and love for labor and a conscientious attitude towards one's job; personnel training; political, economic and occupational training; activity to secure cadres of young workers and combat turnover. The labor collectives themselves are granted the right to outline and implement an appropriate complex of measures.

It is known that labor collectives are empowered to make suggestions on retooling, mechanization and automation, improving production organization and raising production standards, reducing manual, low-skill and heavy physical labor, and to participate actively in their implementation. This activity also directly influences reducing personnel turnover and stabilizing the collective.

Labor collectives are granted the right to participate in discussing questions of improving the structure of the enterprise. Under Article 82 of the "Regulations on the Socialist State Production Enterprise," the director approves the staff and structure in conformity with standard staffs and structures. 20 The enterprise structure is constantly being perfected, the number of small and parallel operating subdivisions is being reduced, and steps are being taken to reduce the size and cost of the managerial apparatus.

With the right to personally resolve these questions, the leaders of many enterprises had ordinarily been resolving them only in concert with public organizations, even prior to adoption of the Law on Labor Collectives.

Now, though, the right to participate in discussing and resolving questions of perfecting enterprise structure has also been extended to the labor collectives directly as well. This does not, of course, signify that a labor collective meeting or conference must be convened for each occasion connected with a change in enterprise structure, no matter how insignificant. As before, the administration can decide these questions together with public organizations. But if the reference is to a substantial change in the structure which touches the interests of many workers and employees, consultation with the collective prior to making a final decision would be appropriate.

Based on the USSR Law, labor collectives PARTICIPATE, THROUGH PUBLIC ORGANIZATIONS AND IN ACCORDANCE WITH THE USSR LEGISLATION, IN DECIDING QUESTIONS OF DESIGNATING SUPERVISORY WORKERS AT ENTERPRISES AND IN INSTITUTIONS AND ORGANIZATIONS; THESE WORKERS ARE APPOINTED AND RELIEVED OF THEIR POSITIONS WITH CONSIDERATION OF THE OPINION OF THE LABOR COLLECTIVE.

In this particular norm, the reference is to those supervisory workers assigned by the enterprise leader. These, naturally, do not include both the enterprise leader himself, his deputies, the chief engineer, chief account, chief of the technical control department, head of the legal service, and several other enterprise workers named to their positions and relieved of them by a superior agency.

The most complex and responsible personnel work is personnel selection, that is, determining that they correspond to the duties of a specific position. It is one thing to deal with advancing workers to supervisory positions from among the reserves of a given enterprise, but it is another to evaluate the business and other qualities, organizational capabilities and ability to work with others of a candidate "from the outside." The collective or public agencies representing it must take part in this work.

Article 230 of the RSFSR Labor Code and analogous Labor Code norms of other union republics directly anticipate that the designation of workers to supervisory economic positions will be made by the administration with consideration of the opinion of the trade-union committee.

The provisions of Article 18 of the "Principles of USSR and Union Republic Labor Legislation," under which a worker cannot be dismissed without the prior consent of the trade-union committee except in cases outlined in USSR legislation, are an effective measure for the collective to monitor the legality and substantiation for dissolving a labor agreement on administration initiative. Neither should one underestimate the role of Article 20 of the "Principles," under which, on demand by the trade-union agency (at least the rayon level), the administration is obligated to dissolve a labor agreement with a supervisory worker or dismiss him from the position he occupies if he has violated the labor legislation, is not meeting his obligations under a

a collective agreement, is exhibiting bureaucratism [obstruction and punctiliousness].

The Law on Labor Collectives thus not only reinforces the practice which has evolved, but also broadens the powers of labor collectives by extending to them the right to discuss directly the candidacy of workers assigned to supervisory positions, to express an opinion on their suitability for the positions. This opinion is in the form of a recommendation, but the administration cannot ignore it, it must take it into account.

The labor collective itself determines what order to examine particular questions in. Thus, it can instruct the administration and public organizations to decide specific questions connected with assigning workers to supervisory position or relieving them of them without bringing those questions up at a meeting of the collective; it can approve a list of individual supervisory positions which are to be filled or reassigned only with consideration of the opinion of the collective (workers' meeting), and so on.

Let it be noted that a competitive procedure is widely used at present for hiring workers. This is the basic procedure in scientific research institutions. Here, too, the labor collective's say is important, inasmuch as the appropriate measures are carried out publicly and labor collective representatives are on the competition committees.

Certification is a basic form of verification of the suitability of workers (including supervisory) for positions. It is done by a commission created from among members of the labor collective. The certification process verifies the job qualifications of the worker and draws a conclusion as to the possibility of leaving him in a position or the appropriateness of moving him to another job corresponding to his occupational skills and capabilities.21

In conclusion, I should like to note that, under present conditions, activity on developing in labor collectives an atmosphere of friendship, cooperation and comradely mutual assistance with a view towards resolving complex multilevel tasks set each enterprise in the most effective way possible must be an important direction in personnel work.

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Use of Incentives Funds

Moscow KHOZYAYSTVO I PRAVO in Russian No 6, Jun 84 pp 35-38

[Article by Candidate of Economic Sciences V. Rakoti, deputy chief, wage department, USSR State Committee for Labor and Social Problems, and Candidate of Economic Sciences R. Yakovlev, head, wage department, Scientific Research Institute of Labor, USSR State Committee for Labor and Social Problems, under the heading "Labor Collectives and the Law": "Powers of Labor Collectives to Distribute and Use Economic Incentives Funds: Commentary on Article 14

of the 'USSR Law on Labor Collectives and Increasing Their Role in the Management of Enterprises, Institutions and Organizations'"; passages rendered in all capital letters printed in boldface in source]

[Text] Under the article which is the subject of this commentary, LABOR COLLECTIVES: PARTICIPANTS IN DECIDING QUESTIONS INVOLVING THE USE OF MATERIAL INCENTIVES FUNDS, SOCIOCULTURAL AND HOUSING CONSTRUCTION FUNDS, PRODUCTION DEVELOPMENT FUNDS; DISCUSS AND APPROVE EXPENDITURE ESTIMATES FOR THESE FUNDS AND MONITOR THEIR EXECUTION. THE MATERIAL INCENTIVES AND SOCIOCULTURAL AND HOUSING CONSTRUCTION FUNDS GENERATED AT ENTERPRISES AND IN ORGANIZATIONS CANNOT BE WITHDRAWN WITHOUT THE CONSENT OF THE LABOR COLLECTIVE: LABOR COLLECTIVES PARTICIPATE IN DECIDING QUESTIONS OF GIVING WORKERS MATERIAL ASSISTANCE, UNDER THE ESTABLISHED PROCEDURE, FOR COOPERATIVE AND INDIVIDUAL HOUSING CONSTRUCTION AND ALSO TO IMPROVE HOUSING CONDITIONS OR SET UP HOUSE USING MATERIAL INCENTIVES FUNDS, SOCIOCULTURAL AND HOUSING CONSTRUCTION FUNDS AND OTHER FUNDS (MEANS) DESIGNATED FOR THESE PARTICULAR PURPOSES; THEY APPROVE THE CANDIDACY OF WORKERS WHICH CAN BE OFFERED SUCH MATERIAL ASSISTANCE.

The economic incentives funds of enterprises are generated through deductions from profit (or lower cost) based on normatives linking the amounts of funds left to the discretion of the enterprises to indicators describing the end results of their economic activity.

Such funds, including the material incentives fund, the sociocultural and housing construction fund and the production development fund, are created in all economic agencies covered by the "Regulations on the Socialist State Production Enterprise" and "Regulations on the Production Association (Combine)" and other acts of that type. Each of them is generated and used under strict procedures. Thus, the "Basic Regulations on Generating and Spending the Sociocultural and Housing Construction Fund (Incentives Fund) in Industry in 1981-1985" were approved by the USSR Gosplan, USSR Ministry of Finance, USSR State Committee for Labor and Social Problems and AUCCTU on 5 March 1980 based on the CPSU Central Committee and USSR Council of Ministers decree of 12 July 1979 "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Improving Production Efficiency and Work Quality." In consideration of a number of new circumstances, appropriate supplements and changes have been made to that document.

The large-scale economic experiment being conducted in five ministries is an important stage in perfecting the process of regulating the generation of economic incentives funds in industry. The basic thrust of the experiment is to orient labor collectives towards maximum growth in indicators over the preceding period and unconditional fulfillment of contracted delivery plans. In this regard, some simplification of the procedure for forming these funds and maximum consideration of branch and other features of enterprise economic activity are provided for.

The active, direct participation of labor collectives in resolving questions connected with the use of economic incentives funds facilitates developing in each worker a sense of genuine proprietorship of production and the displaying of labor enthusiasm and creative initiative. But, in order for this to happen, each must have an accurate understanding of the size of these funds, the opportunities for increasing them and the procedure for spending them.

Material incentives funds are used for various types of bonuses, including those based on intraplant socialist competition, reviews and contests; for one-time incentives to workers; for rewards for overall enterprise work results based on results for the year; one-time (including nonrecompensed) materials assistance; paying for annual vacations (a certain percentage thereof).

Under the general rules, these funds are used only as incentives to enterprise workers. However, there are a number of exceptions to these rules, created by special resolutions. Thus, enterprises are granted the right to provide, using these funds, incentives to labor veterans (pensioners) who were participants in World War II and disabled workers previously employed at a given enterprise, medical-hygiene unit personnel, factory clinic personnel, workers in dispensaries, palaces of culture, libraries and certain other cultural and personal-services subdivisions.

The sociocultural and housing construction fund is used primarily to finance the construction and overhaul of housing, children's institutions, dispensaries, clubs, sports facilities and other cultural and personal-services projects, to acquire inventory, equipment, apparatus, specialized means of transport for these facilities, and so forth; for health-improvement, cultural-educational and physical culture measures. This fund can also be used for other purposes connected with accelerating the social development of the labor collective.

A portion of the material incentives fund can also be used to finance housing construction and for sociocultural measures.

The production development fund is used to finance expenditures on retooling the enterprise, perfecting and manufacturing new items, and for other purposes.

The powers of labor collectives to use material incentives funds at enterprises and associations of the five ministries participating in the economic experiment have been broadened appreciably. Thus, labor collectives of the Ministry of Heavy and Transport Machinebuilding, Ministry of Electrical Equipment Industry, Belorussian SSR Ministry of Light Industry and Lithuanian SSR Ministry of Local Industry have been given the right to use independently the funds deducted to the incentives fund from surcharges to prices for highly efficient new output corresponding to the best domestic and foreign models and for output with the state Badge of Quality. In the

Ministry of Electrical Equipment Industry, all funds calculated using special bonus systems can be directed to the common material incentives fund and used at the discretion of the labor collectives.

The right of labor collectives to participate in deciding questions of using economic incentives funds is exercised in general as follows.

The enterprise administration, jointly with the trade-union committee, works out draft plans for using each fund prior to the start of the planning year. These draft plans are brought up for discussion at general meetings (conferences) of the labor collectives and are modified to conform to suggestions made, after which they are approved and added to the collective agreement following the established procedure. At the same time, these documents are communicated to the members of the labor collective. The administration and trade-union committee inform workers and employees about fulfillment of these estimates, about corresponding additions to and changes in them and the reasons, within the time periods outlined by the collective agreements. Let us note that the effectiveness with which funds are used and the monitoring of their expenditure are significantly improved if the estimates are broken down correspondingly by quarter.

It is important to stress that a superior organization cannot demand changes in fund expenditure estimates approved at the enterprise. This applies as well to local Gosbank agencies. Decisions on the amounts of material incentives funds to be directed by the enterprise towards reimbursing wage fund overexpenditures are made by the labor collectives.

The epxerience of a whole series of production associations and enterprises (AvtoZIL, Svetlana, Dnepropetrovsk Combine Plant imeni K. Ye. Voroshilov and others) has shown that pressing and quite complex tasks of increasing production efficiency are in the end being successfully resolved on the basis of intelligent exercising of labor collective powers in the area of distributing and using economic incentives funds.

It is common practice in large and medium-sized enterprises to distribute a portion of the annual funds (foremost the material incentives funds) to enterprise shops and other subdivisions, linking their amounts to proposed and then to their actual work results. This ensures a wider worker involvement in participation in the effective, fair use of these funds. The development of a procedure for generating the incentive funds of enterprise subdivisions is the province of a number of public agencies: the economic analysis public buros brigade leader councils and other independent organizations.

Worker information on procedures for spending funds in each area, determined by the corresponding regulation, is of great importance in involving members of the labor collective in the effective use of material incentives funds. These regulations are approved by the enterprise administration with the consent of the trade-union committee and must be communicated to the workers. This naturally applies as well to awarding bonuses based on basic economic

activity results and to paying awards based on work results for the year. The labor collectives themselves, with consideration of the recommendations of appropriate management agencies and trade unions, determine the terms for awarding bonuses and secure them in local documents. Ensuring conformity of an award (bonus) to the personal labor contribution of the worker is the task of each labor collective.

Practice has shown, however, that the material incentives funds at many enterprises is not governed by such documents in a whole series of areas and that there is no proper recording of fund expenditure. At the same time, this often leads to their inefficient use, to secret resolutions of individual questions, and sometimes to malfeasance as well. It is important that labor collectives participate both in working out the procedure for spending incentives funds and in monitoring those expenditures. This is facilitated by discussing the drafts of corresponding documents at meetings of the collectives of sectors, shops and brigades or at joint meetings of public organizations or the aktiv. The large-circulation newspapers, bulletin-board press, radio and the other mass media play a large role in communicating decisions made to the workers and in monitoring their implementation. "Social justice is at the very foundation of Soviet Society," noted Comrade K. U. Chernenko, CPSU Central Committee General Secretary, in his speech at the February (1984) CPSU Central Committee Plenum. "And that is its great strength. Which is why it is so important that it unswervingly be followed in daily affairs, be they about wages and bonuses, distributing apartments or travel authorizations, awards -- in a word, so that everything is done fairly, in accordance with the labor contribution of each person to our common cause."23

Practice has shown that quite a bit of the funds designated for incentives is still being spent otherwise, on payments connected with eliminating the consequences of "storming," and disorganization, and occasionally with the sluggishness of incompetence of individual economic leaders as well. It is impermissible that some enterprises, under the guise of rewarding outstanding workers for doing especially important jobs, provide additional pay for overt or covert overtime work, work on days off or holidays, to "stimulate" accelerated delivery or "knocking out" of parts, raw and other materials or semifinished products not delivered on time. Only effective worker monitoring of the expenditure of these funds will lead to stopping the squandering of incentive funds, to strengthening the moral-psychological climate in the collectives, to educating all its members in an active attitude toward life and intolerance of shortcomings.

Unfortunately, the funds to offer workers various kinds of material assistance are not always used sufficiently fairly or with adequate substantiation either. Sometimes those not actually needing it receive it.

Broad community monitoring of material assistance (especially in large amounts) to members of the labor collective could be a barrier to any kind of abuse.

The movement to ensure above-plan growth in labor productivity of 1.0 percent and a 0.5 percent reduction in output cost at each enterprise is now spreading throughout the country. Labor collectives are called upon to pose the question in such a way that attaining these goals is viewed as an especially important production task and so that all truly outstanding workers receive the incentives they deserve.

#### FOOTNOTES

- 1. Approved by USSR Council of Ministers decree of 24 January 1980 (SP SSSR, No 6, 1980, Article 43).
- Approved by USSR Council of Ministers decree of 11 December 1979 (SP SSSR, No 2, 1980, Article 12).
- 3. Approved by USSR Council of Ministers decree of 22 June 1972 (CP SSSR, No 13, 1972, Article 70).
- 4. For more on the forms and methods of legal service activity, see: Methods Recommendations of the USSR Ministry of Justice, No K-14-497 of 19 August 1982, "On the participation of the legal services of associations, enterprises and organizations in ensuring the protection of socialist property and combatting mismanagement" (BYULLETEN' NORMATIVNYKH AKTOV MINISTERSTV I VEDOMSTV SSSR, No 2, 1983).
- 5. PRAVDA, 4 December 1983.
- 6. For more on the activity of economic analysis buros see EKONOMICHESKAYA GAZETA, No 47, 1983, p 7.
- 7. For more detail, see: T. Krutenko, "Day of Discipline," KHOZYAYSTVO I PRAVO, No 11, 1982, p 88.
- 8. SP SSSR, No 21, 1983, Article 115.
- 9. See: "Standard Instruction on Procedure for Writing Off Unusable Equipment, Stock and Other Property Included in Fixed Assets (Funds)" in the collection "Osnovnyye akty o pravovoy rabote v narodnom khozyaystve" [Basic Documents on Legal Work in the National Economy], Moscow, 1983 p 205.
- See supplement to the USSR Ministry of Finance Letter, No 179, of 30 December 1982 (BYULLETEN' NORMATIVNYKH AKTOV MINISTERSTV I VEDOMSTV SSSR, No 8, 1983, p 8).
- 11. For more on experience in using charges for petty theft of state property at Shakhtinsk Packing Plant, see: T. Stepanova, "The Collective Makes a Decision," KHOZYAYSTVO I PRAVO, No 8, 1983 p 36.

- 12. G. Polozov, "Strict Inquiry," KHOZYAYSTVO I PRAVO, No 2, 1983, p 37.
- 13. V. Yastrebov, "Causes of Theft of Socialist Property," SOVETSKOYE GOSUDARSTVO I PRAVO, No 8, 1983, p 87.
- 14. Approved by USSR Supreme Soviet Presidium Ukase of 13 July 1976 in the version published as Ukase of 12 August 1983 (VEDOMOSTI VERKHOVNOGO SOVETA SSSR, No 29, 1976, Article 427; No 33, 1983, Article 507).
- 15. The material responsibility of workers and employees for damages caused by them is regulated by the "Principles of USSR and Union Republic Labor Legislation" (Articles 49, 90 and 93), the RSFSR Labor Law Code (Articles 118-123, 215 and 255) and corresponding Labor Code articles of other union republics.
- 16. VEDOMOSTI VERKHOVNOGO SOVETA RSFSR, No 51, 1977, Article 1215; No 49, 1982. Article 1823.
- 17. VEDOMOSTI VERKHOVNOGO SOVETA RSFSR, No 51, 1977, Article 1216; No 49, 1982, Article 1824.
- 18. The responsibility is anticipated to be in the form of a fine of 20 to 100 rubles or corrective work for a period of one to two months, with 20 percent of the wages withheld.
- 19. Currently, when doing this work, consideration is given to instructions from the Deputy Procurator General of the USSR, USSR Minister of Trade and Chairman of the Tsentrosoyuz Board, No 7/21/047-75/SP-45, of 11 March 1968, "On the Procedure for Trade Organization Transmittal to Investigative Agencies of Materials on Shortages of Goods and Monies," in the collection "Osnovnyye akty o pravovoy rabote v narodnom khozyaystve," p 231.
- 20. Standard staffs and structures are approved by a superior management agency.
- 21. "Regulation on Procedure for Certifying Supervisory, Engineering-Technical Workers and Other Specialists of Enterprises and Organizations of Industry, Construction, Agriculture, Transport and Communications" (approved by USSR State Committee for Science and Technology and State Committee for Labor and Social Problems decree of 5 October 1973, with changes of 22 October 1979, BYULLETEN' NORMATIVNYKH AKTOV MINISTERSTV I VEDOMSTV SSSR, No 8, 1980).
- 22. Other very important documents regulating the fund-generating process are: "Basic Regulations on Formation and Expenditure of the Material Incentives Fund and Sociocultural and Housing Construction Fund (Incentives Funds) in 1981-1985 in Construction (Contractor Activity)," as approved by a 10 July 1980 decision of the Interdepartmental Commission attached to the USSR Gosplan (EKONOMICHESKAYA GAZETA, No 41,

1980); "Regulation on the Material Incentive Funds of Sovkhozes and Other State Agricultural Enterprises," approved 29 April 1981 by the USSR Ministry of Agriculture, USSR State Committee for Labor and Social Problems, USSR Ministry of Finance, USSR Ministry of Fruit and Vegetable Industry, USSR Ministry of Food Industry and AUCCTU, with the concurrence of the USSR Gosplan (EKONOMICHESKAYA GAZETA, No 22, 1981); "Instruction on Procedure for Forming and Using Development Funds in Production Associations, Enterprises and Organizations of Industry, in Construction-Installation and Planning-Surveying Organizations," approved by the USSR Ministry of Finance, USSR Gosplan, USSR Gosbank and USSR Stroybank on 4 April 1980 ("Sovershenstvovaniye khozyaystvennogo mekhanizma" [Perfecting the Economic Mechanism], a collection of documents, Moscow, Izd-vo "Pravda", 1982, pp 273-278).

23. "Materially vneocherednogo Plenuma Tsentral'nogo Komiteta KPSS, 13 Fevralya 1984 g." [Materials of the 13 February 1984 Extraordinary CPSU Central Committee Plenum], Moscow, Politizdat, 1984, p 13.

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LABOR

## REGIONAL WORK PLACE-MANPOWER RESOURCE BALANCE STUDIED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 10, Oct 84 pp 120-122

[Article by V. Volostnykh, doctor of economic sciences, and M. Alekhin, candidate of economic sciences: "Management of a Balanced Development of Work Places and Manpower Resources at the Regional Level"]

[Text] One of the most important problems in the efficient functioning of the national economy, the sectors and individual enterprises is the balanced development of work places and the numerical strength of the work force. In the Main Directions for the Economic and Social Development of the USSR for 1981-1985 and the Period Through 1990, it is stated that it is essential to take steps to achieve a balance between existing work places and work places being created, and manpower resources.

Increasing the number of work places above the number of workers available leads to increased production prime costs as the result of the relative increase in amortization deductions, expenditures for the upkeep of equipment and so forth; to the irrational utilization of engineering and technical workers and employees, which entails deterioration in the quality of management and the technical preparation for production; and to a number of negative social consequences reflected in a decline in labor intensiveness and productivity, unjustified wage increases, deterioration of product quality and so forth.

Analysis of material gathered during the course of a study of 90 enterprises in the Leningrad area has shown that on average, at those enterprises there are 1,000 workers for every 1,200 work places. A similar picture is seen with regard to engineering-technical workers and employees. Notwithstanding, the trend toward increasing numbers of work places of all kinds and in all regions is still being maintained. The reason for this situation lies in planning from what has been achieved, and in the lack of coordination between the elements of the management apparatus, in which one person plans the numbers while another plans capital construction. This all results in a situation in which enterprises and ministries are disinclined to place restraints on the numbers of work places. And the psychological aspect, too, plays a not unimportant role. Up to now managers have been trained to consider fixed production capital as the chief wealth. In our opinion it is more sensible to proceed from the premise that our chief wealth is people, with their specific labor capabilities, and to set the task of providing conditions for highly productive work at each work place.

In a number of the socialist countries the problem of managing the development of work places is being partially resolved. For example, in Czechoslovakia, since 1971 a record has been kept of work places and a normativ coefficient has been established for their shift utilization (1.6 for the national economy overall and 2.0 for the main shops at enterprises that do not operate round the clock). If the actual value for this coefficient (by enterprise and by sector) is lower, the local organs ban the design and construction of new projects and the banks will not put up the funding. In this way the number of work places is contained within reasonable limits.

Here in this country some work has also been done in this direction. Work places are recorded, certified and registered. However, this material sits in the departments of the scientific organization of labor [NOT] and exerts virtually no effect on enterprise development. Although this work is labor intensive its results are minimal. They do not enable any accurate determination of the number of work places at an enterprise or control over the process of their development.

Because of the importance of the problem and the opportunities for resolving it just at the regional-sector level, a commission of the Leningrad Gorispolkom has become the initiator in work that includes the preparation of methodology for handling the development of manpower resources in the Leningrad area. All work in this direction is done at three levels, the enterprise, the head institute and the Leningrad City Planning Department, which is responsible for a group of sectors.

During the first stage, methodological materials on recording and analyzing the existing work places were prepared and introduced. Developers were assigned the task insuring methodological unity in recording and analytical work in different sectors, and simplicity in this work as an essential condition for practical introduction. Despite the apparently trivial nature of the task, the question arose of how to count work places, given the great diversity in different sectors. This diversity required concretization of the concept of "work place." In the state standards and the sector methodological materials a work place is defined as a zone equipped with the necessary technical facilities, in which labor activity is engaged in by executors or groups of executors jointly carrying out one kind of work or operation.

This definition could not serve as the methodological basis of work, for the following reasons:

--the descriptive attributes form an essential but manifestly inadequate condition for the existence of a work place. Proceeding from this description alone it is impossible to distinguish the work places of setters-up, repairmen, painters and so forth, or to determine the number of work places at projects with constantly changing work tasks (this applies to virtually all projects in shipbuilding and construction). For example, the number of fitters and assemblers working on a ship during the course of a single month varies from several men to several dozen, while their work places may be a pipe for one, an engine foundation for another, and a ship's mechanism for a third;

--when used to calculate work places for engineering-technical workers, the proposed definition reduces the task to a count of the chairs, desks, adding machines and so forth. This is at variance with proper thinking. If a desk remains but its function is given to a computer, it means that it is not a work place.

Accordingly, in the methodology, the availability of a specified volume of work was taken as the general and main attribute of any work place. Among work places we distinguish permanent work places—the places for machine tool operators, flow—line workers and so forth; temporary work places, determined by the work task (painters, equipment adjusters and so forth); and episodic work places—places associated with a one-time use of technological equipment (for example, a grindstone).

As a rule, during the recording, certification and registering of work places the question of quality is sidestepped. This makes it impossible to use the results obtained in order to manage the development of work places. In the methodology introduced in the Leningrad area this shortcoming has been eliminated. The quality of a specific work place is evaluated as the relationship between labor productivity at that work place and the productivity achieved when the same articles are fabricated at the best, known similar work place. If, for example, it is possible to fabricate 10 bolts an hour on a universal lathe, 50 on a turret lathe, and 500 on an automatic thread-rolling machine, then the quality of the work places are assessed respectively as 0.02, 0.10 and 1.00.

During the first stage about 290,000 work places at enterprises, scientific research institutes and design brueaus in machine building and instrument making were studied and analyzed. As a result, the following conclusions were drawn:

- -there are 48,000 redundant work places at the enterprises studied;
- -- the average regional indicator for work place quality per main production worker is 0.38;
- -- considerable variation exists in the quality indicator;
- --within the structure of work places for engineering-technical workers and employees there is a surplus number of specialists with an insufficient number of technical executors. Here, inconsistencies are observed in the provision of specialists for the enterprises.

Of course, it is not possible to raise the question of eliminating all 48,000 redundant work places on the basis of these conclusions. It is necessary to hold a certain reserve in the event of equipment repair, changes in the plan structure and so forth. Nor is it possible to say definitively which of these work places require improvement. However, the results obtained do make it possible to initiate planning for the development of work places in the region.

Goal-oriented, comprehensive programs for the balanced development of work places for the five-year period (the second stage of the work) are now being

worked out at the enterprises of a number of sectors located in the region. For this, the head sector institutes are evaluating the volume of production, the products lists and product priorities, labor productivity growth rates, the effectiveness of each direction in scientific and technical progress, and the stepped-up nature of enterprise plans. A special word is in order with respect to the latter. The question of eliminating or improving work places is properly resolved only after an evaluation of the stepped-up nature of plans. In the more stepped-up production facilities they should be improved; in the less so, they should be eliminated. Accordingly, in parallel with the development of programs, a methodology is being introduced for evaluating the stepped-up nature of plans. The question of creating new work places will be resolved (by head institutes) only given the introduction of basically new technologies or a sharp increase in the volume of output.

Realization of the measures envisaged by the goal-oriented, comprehensive programs will make it possible to reduce the proportion of workers engaged in unattractive and low-productivity labor, which in one sense will help in overcoming the differences in the content and nature of labor. These measures are orienting the plants and institutes on a realistic rather than merely nominal freeing-up of workers.

In addition, introduction of the programs creates the conditions for substantiating and bringing good order to the capital investment policy. In the programs, classificiations are made of the investments associated with the creation of new production facilities and the improvement of old ones. In turn, the latter is divided into expenditures to replace obsolete and worn-out equipment, alter the infrastructure of an enterprise, nonproduction spheres and so forth. This kind of "discreteness" in capital investments and their specific aim, based on the previous sections of the goal-oriented, comprehensive plan, makes it possible at least partially to limit the unjustified use of funding.

The regional organs can realistically become involved in the process of managing the development of work places, using two levers for this purpose, namely planning the work of the construction-and-assembly organizations, and shifting the limits on the numbers of workers between sectors and enterprises. The Leningrad Planning Department now has an opportunity to allocate manpower resources in such a way that they are found where they can be used most effectively.

In their present form the goal-oriented, comprehensive programs also constitute a tool for planning the balanced development of work places at the regional level. However, exerting any influence, with their help, on the actual course of this process by the regional organs is difficult and can be done only once in a five-year plan. Therefore, the third stage of work provides for the development and practical introduction of a methodology for regional planning for the number of work places at an enterprise. The basic idea is to create a normativ that enables evaluation of the required number of work places as a function of labor intensiveness in the production program, the shift coefficient, the type of production, variability in the plan structure, the requirements for reserve work places, trends in scientific and technical progress and so forth.

The development and implementation of the programs are impossible on the practical level without automation of the process of handling data on work places. Therefore, a data bank is being set up at the regional level on work places, using computer methods and the necessary software.

The work has engendered a whole range of problems of an organizational and methodological nature. However, the proposed measures, primarily the introduction of the goal-oriented, comprehensive programs within the framework of the entire region, will, in our opinion, make it possible to improve production efficiency and resolve a number of social problems.

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LABOR

# REGIONAL ASPECTS IN MANPOWER REQUIREMENT PROJECTION STRESSED

Tashkent OBSHCHESTVENNYYE NAUKI V UZBEKISTANE in Russian No 5, Sep-Oct 84 pp 13-19

[Article by V.I. Galkin: "Methodological Problems in Predicting Manpower Under Regional Conditions"]

[Text] The regional aspect of reproduction of the labor force and the utilization of manpower is attracting increasing attention from the specialists. Papers and dissertation studies are being done on this subject in virtually all the country's republics, economic regions and oblasts. As a result a quite solid theoretical and empirical basis has been established for overall evaluation of the results of scientific investigations in this direction.

Even a superficial glance at the published literature, dissertation work and scientific reports shows the serious advances made in studying the problem of the formation, distribution and utilization of manpower at the regional level.

From the assessment of demographic features to specific recommendations on the rational utilization of manpower, from studies of partial questions to the comprehensive evaluation of manpower in a region, from the general or summary balance of manpower to partial balances for youth and other population categories—such are the most important directions in the development of scientific studies in the field of the reproduction of the labor force and manpower. All this has made it possible to concretize tasks in the further study and practical resolution of the problem of improving efficiency in the utilization of manpower as applied to specific regions of the country, including Central Asia.

As was emphasized in the Central Committee Accountability report to the 26th CPSU Congress, "in Central Asia and in a number of regions in the Caucasus... there is surplus manpower, particularly in the countryside. And this means that it is necessary to be more active in recruiting the population in those areas in the opening up of new territories in the country. And, of course, to develop there skilled workers of indigenous nationality, first and foremost from among rural youth, essential for the national economic production, and to offer more extensive training for them.\*

<sup>\* &</sup>quot;Materialy XXVI s'yezda KPSS" [Materials on the 26th CPSU Congress], Moscow, 1981, p 54.

Tasks for the regions of Siberia, the Far East and the European Part of the Soviet Union have been defined with equal specificity. Consequently, the tasks are clear, and the crux of the problem lies in their practical realization. Experience shows that the complexity here is, on the one hand, in the degree of scientific substantiation for the scientists' recommendations, and on the other, in the lack of any proper level in managing the process of the formation, distribution and utilization of manpower. The process of managing manpower has been refined as a result of the creation and successfull functioning of the republic committees on labor and of their organs in the oblasts, rayons and major cities, particularly since the committees were given the rights to carry out expert reviews. Notwithstanding, the forms and methods of manpower management require further improvement.

From the standpoint of the need to strengthen the scientific substantiation of recommendations, it should be noted that despite the efforts of the scientists, problems of improving efficiency in the utilization of manpower have been on the agenda since the early Sixties. Moreover, the complexity of these problems has grown, along with the scale of resources needed to resolve them.

In Uzbekistan, Central Asia's largest republic, the level of employment in social production has risen consistently. However, during the 10th Five-Year Plan and the first years of the 11th Five-Year Plan the level of employment has fallen. Scientific projections made in the early Sixties proved correct for 10-12 years, but then there was sharp deviation between the actual situation and the predicted situation. The immediate reasons are well known. They include primarily the contradictions between rapidly growing manpower resources and the increase in the numbers of work places, between the requirements of scientific and technical progress made on the quality of manpower and the actual level achieved in the training of work cadres and specialists, and between the scales of training and the nature of distribution and utilization.

There are also, however, deep-lying reasons that affect the quality of our projections in the field of the formation, distribution and utilization of manpower, and the degree of scientific substantiation in scientists' recommendations concerning improvements in this process.

They include the depth of our scientific knowledge about the law-governed patterns and regional features involved in manpower reproduction, its place in the system of expanded socialist reproduction, the nature of its interconnection with other elements of the production forces, and, finally, the degree of perfection in the instrument used to make scientific predictions about the development of this process in the foreseeable long term.

We must deal with the last-named factor, or reason, since its role in solving the problem of efficiency social production is growing.

Increased attention to long-range projections for the socioeconomic and scientific and technical development of the country as a whole and of its regions is typical of the present stage in improving the system of national economic management in general. This thought has been repeatedly stressed in the speeches of CPSU Central Committee general secretary K.U. Chernenko.

At the CPSU Central Committee February (1984) Plenum he pointed to the need to think deeply about the great and complex tasks involved in perfecting developed socialism "taken as a whole, and to draw up a precise long-term strategy for resolving them."\* As long ago as the 26th CPSU Congress it was stated that "Today, looking ahead 5 or 10 years, we must not forget that it is precisely in those years that ... the national economic structure will be formed with which the country will move into the 21st century. It should embody the main features and ideals of the new society, be in the vanguard of progress, and personify the integration of science and production and the unbreakable union of creative thought and creative labor."\*\*

The program was set forth and the methodological requirement developed in the CPSU Central Committee and USSR Council of Ministers decree on improving the economic mechanism and raising work quality (1979), where the aims, tasks and coherence of work on two very important projection documents were defined: the "Comprehensive Program for Scientific and Technical Progress through the Year 2005" and the "General Scheme for the Development and Disposition of Production Forces through the Year 2000."

The two documents contain a list of the most important regional problems in the country's socioeconomic and scientific and technical development, including for the Central Asian region, and including the Uzbek SSR as part of its makeup. As applied to our region, this list contains the problem of improving efficiency in the utilization of manpower under the conditions of scientific and technical progress. The scales are extremely large.

Suffice it to note that in the long term, taking into account the high and stables rates of population growth and its low degree of mobility, the republic's manpower resources will almost double. Consequently, even by maintaining the far from perfect structure of employment, in the long term, in order to solve the problem of the utilization of manpower resources it will be necessary to create on this same territory essentially "another Uzbekistan" with a complex, multisector economy.

Under the influence of scientific and technical progress, each 20 years labor intensiveness in social production is about halved. Consequently, the rates of development for the republic's production forces should double yet again.

Given the present production potential and resources already in economic circulation, Uzbekistan cannot fully resolve the task it has been set of improving efficiency in the utilization of rapidly growing manpower resources. Hence the need to bring new resources into economic circulation and to make more efficient use of the potential already available.

<sup>\* &</sup>quot;Materialy vneocherednogo Plenuma Tsentral'nogo Komiteta KPSS. 13 fevralya 1984 g" [Materials on the CPSU Central Committee Extraordinary Plenum. 13 February, 1984], Moscow, 1984, p 17.

<sup>\*\* &</sup>quot;Materials on the 26th CPSU Congress." p 44.

This, in general terms, is the projection situation in the field of employment and the utilization of manpower. The situation is being made more complicated by the limiting effect of water and fuel and energy resources and the effectiveness factor for capital investments.

Under these conditions, it is virtually impossible to solve the problem of improving efficiency in the use of manpower using the old methods.

Because of the above, in its work the Uzbek SSR Academy of Sciences Council for the Study of Production Forces is making use of an improved methodology for manpower projections. The basis of this methodology is its systematic nature, comprehensiveness and variability and its program—goal—oriented approach and the method of prediction of natural indicators.

The essence of these methodological methods consists of two fundamentally new methodological principles:

--manpower resources are regarded as a separate entity in the general system of social problems in the development of production forces (level of employment, personnel, standard of living and services sphere), with the outcome on the means of existence as a specific function of projection for the development of the republic's production forces;

-- the projection of manpower resources is linked with the system of resource provision, bearing in mind not only economic but also natural resources.

With this methodology for projections the range of factors that determine efficiency in the utilization of manpower is sharply extended, while the manpower resources themselves, as applied to the specific regional features of the republic and given all the importance of the problem of efficient utilization, make up only part of the projection system.

In line with this an attempt was made to work up a projection for the formation, distribution and utilization of manpower, proceeding from the following logical premises:

- 1) extrapolation of the trends established and taking shape in the development of employment during the 11th Five-Year Plan. The results obtained show a systematically falling level of employment with deterioration of all corresponding socioeconomic indicators per capita, taking into account the high rates of population reproduction. It is clear that this variant does not stand up to serious criticism and cannot be used as a base;
- 2) achieving more complete and rational employment, such as also insures a sharp rise in the living standard and the consumer services sphere. This variant insures complete resolution of the most important social problems in the development of production forces (within the limits of scientifically substantiated norms), but requires enormous investments of resources with a relatively poor economic efficiency. Moreover, it is constrained in terms of a number of unconnected resources, namely water and energy. Until the problem of diverting part of the flow of the Siberian rivers into the Aral

Sea basin and including Central Asia in the unified energy network of the Soviet Union has been fully resolved, and given the limited capital investments, this variant remains something to be desired but is extremely problematical and essentially unrealistic.

3) the precise coordination of economic and natural resources. Work on this variant has required a balance between manpower resources and the generalized indicators expressing the development of production forces, namely the national product and the national income, and factors involved in their growth--fixed capital and capital investments, numbers of workers and their labor productivity; and between manpower resources and the system of indicators for capital intensiveness, the output-to-capital ratio, materials intensiveness, energy intensiveness, water intensiveness, and labor intensiveness in social production.

This linkage is effected given the condition of a certain preferential growth rate for labor productivity over its capital-to-labor ratio, and stabilization followed by growth in the capital-to-output ratio and improved effectiveness for capital investments.

Consequently, this variant for the development of production forces, which brings us closer to solving the problem of improved efficiency in manpower utilization under conditions of strict limitations in terms of water, energy and capital investments, at the same time insures better efficiency in social production.

Thus, in manpower and production force projections, the principles of systematic nature, comprehensiveness, variability and balance are fully reflected; and this undoubtedly raises the level of scientific substantiation for specific recommendations to improve the structure of employment and manpower utilization under specific regional conditions.

The switch from projecting manpower resources at the macroeconomic level to projecting manpower formation, distribution and utilization at lower taxonomic levels—oblasts, rayons and cities—is more complex. The experience that has been gained shows that the worst bottleneck is the inadequacies in the information base, both statistical information and projection information. For example, during the process of projecting employment in the cities of Uzbekistan over the long term one group of workers had to collect input data and work out the accounting balances for manpower for most cities in the republic (data collection was done directly for the enterprises and organizations in the urban economy), determine the scale and nature of "pendulum" migration of manpower, and study the socioeconomic bases for the further development of the urban economy, that is, considerable preparatory work was done on the practical level.

The chief difficulty, however, is lies in the lack of a methodology for predicting manpower in cities; and this has had to be created virtually de novo.

The basis of this methodology was formed by the most important law-governed patterns in the development of employment in cities grouped according to

several of the most important attributes, namely the density of the urban settlements and the functional significance of the prerequisites determining the nature of development in their economies over the long term. In other words, a projection of manpower in accordance with the logic of the groupings was set up as a function of both the developing demographic situation and the nature of socioeconomic development in cities having the same kind of economic functions.

At the same time projections were made of employment normativs, primarily with respect to the level and scales of employment in the home and in the private subsidiary sector, the sphere of training entailing absence from production, and the nonproduction sectors or consumer services spheres.

The calculations show that at each specific stage in the development of production forces, taking into account the projected demographic and economic situation, it is objectively necessary to maintain a certain level of employment in the home and in the private subsidiary sector. In our opinion, as applied also to a labor-surplus republic such as ours, this level should not exceed 12 percent of the total strength of the labor force (about half the present level).

A certain proportion of the labor force should be recruited into the sphere of training with absence from production. Successive calculation of the requirements for skilled manpower having different skill levels and of the forms and methods of training led to the final conclusion that for our region, with the young structure of its population and the requirements for skilled labor under the conditions of scientific and technical progress, this sphere should involve at least 13 percent of the labor force.

Hence, the remaining 75 percent should be engaged in social production.

In turn, critical analysis of construction norms and the USSR Gosstroy rules, and analysis of stability in the coefficients for the interconnection between the level of employment in the sectors of the services sphere (this, in turn, was grouped into three groups of sector: those serving material production; those serving consumers; and those serving society in general) and the services contingent led us to a quite firm conclusion: about 35 percent of the labor force should be employed in the services sphere (including transportation and communications, material-technical supply, procurement, trade and public catering and other sectors).

And finally, the remaining 40 percent of the labor force should be employed in industry, agriculture and construction.

This is the kind of manpower employment projection that, given the availability of appropriate resources, insures a rational structure for employment. It was noted above that the constraints on resources sharply complicate the process of realizing this structure.

Nevertheless, it remains the ultimate goal of improvement in the structure of employment and in improving efficiency in the utilization of manpower

under regional conditions. In this case, one alternative is the resource variant for employment, which leaves about 5-10 percent of total manpower as a national economic manpower reserve.

An attempt was made to work out an indentical model for groups of cities, and then, for each city within a particular grouping, with the intention of moving consistently from the macroeconomic level to projections for the formation, distribution and utilization of manpower by specific cities, taking into account their demographic and socioeconomic development. The complexity of this transition lay in the lack of essential prediction information in part of the socioeconomic development of specific cities, that is, in the conditions of a lack of figures on the reconstruction of old social and cultural, housing and everyday and municipal projects and the construction of new ones.

In turn, linking these projects to a specific city can be done only if a projection is made of disposition factors, including free manpower.

There is only one way out of this closed circle: to work up models for employment in cities, using an initial assessment of the main directions in economic development, proceeding from natural resources and specialization.

To do this we use the work scheme set forth above, but with very substantial amendments, as follows:

- 1) the level of employment in the home and in the private subsidiary sector is determined by proceeding from the general trend toward decrease or stabilization typical of this group in a specific city;
- 2) the level of employment in the training sphere is determined according to the place that it occupies or will occupy in a city over the long term where it is necessary to concentrate the training of personnel for higher and middle-level skills;
- 3) the principle of equalization is applied to the level of employment in sectors providing consumer services, regardless of the sizes of cities and their economic specialization;
- 4) further development of employment in the material production sectors is determined by proceeding from the need to raise the level of comprehensiveness in urban economies given further development of their economic specialty, and, at a given stage, by proceeding from a geological and economic assessment of minerals and raw materials and fuel and energy resources playing a role as a factor in urban development.

Thus, a prediction model has been constructed for the level of employment in cities that reflects the desired variant for urban development over the long term.

The most typical feature of the methodology for projecting manpower resources in the cities is the combination of projection methods reflecting the absolute

levels of employment and their relative expression using the methods of projecting the distribution of manpower growth according to the spheres in which labor is utilized and by sectors of the national economy.

This eliminates any possibility of major errors in the projections and precisely defines the nature of distribution in manpower growth in a city as a function of the goals and tasks of its socioeconomic development.

Experience shows that the methodology developed for projecting the level of employment in the cities serves as a reliable scientific tool for determining development prospects.

These, in general form, are the most important problems in making improvements in the methodology for projecting manpower resources under regional conditions. Of course, in light of party instructions on the need for truly scientific substantiation for the immediate and long-term development of the society of developed socialism along the road to communism, they require further, deep work.

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### EDUCATION

## MINISTRY OFFICIAL ADVOCATES STRONGER EDUCATION BASE

Moscow NARODNOYE OBRAZOVANIYE in Russian No 10, Oct 84 pp 8-11

[Article by K. Nozhko, candidate of economic sciences, USSR deputy minister of education: "Strengthening the Educational Material Base"]

[Text] Basic Directions of Reform of the General-Educational and Vocational School and the adopted decrees of the CPSU Central Committee and the USSR Council of Ministers on questions of school reform contain a concrete program of further strengthening the educational material base.

"An increase of contingents of the general-educational and vocational school and of preschool, boarding-school and other institutions, complication of training and educational tasks and expansion of labor training -- as pointed out in Basic Directions of Reform of the General-Educational and Vocational School--require further development, strengthening and qualitative improvement of the material base of education. Such problems as the full satisfaction of needs at preschool institutions, the creation of conditions for extended-day groups and single-shift work at schools, the education of 6-year old children and creation of a necessary base for labor training and work with children and adolescents during extraschool time have to be solved in the immediate future. There should be created for this, especially in the new regions, a broad program of construction of schools, shops and educational production combines, vocational and technical schools, children's preschool and extraschool institutions, pedagogic educational institutions, institutes for advanced training of teachers, housing for pedagogic personnel, dormitories and boarding houses for pupils." "

The decree of the CPSU Central Committee and the USSR Council of Ministers "On Further Improvement of General Secondary Education of Youth and Improvement of Conditions of Operation of the General Educational School" set targets for 1986-1990 for putting into operation:

--general educational schools with room for not less than 7 million pupils, including 2.64 million pupil's places in rural localities;

--educational laboratory buildings for pedagogic higher educational institutions with a total space of 1 million square meters and for institutes for advanced training of teachers--325,000 square meters as well as

dormitories for them with a total space respectively of 450,000 square meters and 120,000 square meters.

Councils of ministers of union republics and educational organs are to ensure the fulfillment of plans of construction of new school buildings and annexes of classrooms and other quarters lacking in existing buildings of generaleducational schools, educational laboratory buildings and dormitories for pedagogic educational institutions and institutes for the advanced training of teachers.

Attention should be drawn to the fact that the target for startup of educational facilities for 1986-1990 was given without a breakdown by union republics. This is to be done during preparation of the five-year plan of economic and social development for the 12th five-year period. Therefore in the preparation of the draft of the plan for startup of general educational schools and other educational facilities for 1986-1990 for union republics, krays and oblasts, it is necessary to pay special attention to substantiation of proposals for construction of educational facilities and to proceed from the additional requirements of the educational system for carrying out the reform.

In determining the additional requirements for strengthening the educational material base of education it is necessary to take into consideration:

--creation of a material base for teaching children at school from 6 years of age. According to rough estimates, this will require the introduction additionally, mostly in the cities, of approximately 1.9 million pupils. While taking into consideration local conditions, various ways can be determined of solving this problem: construction of new school buildings, additions to them, use of other buildings and so forth, but it is clear that all this will have to be carefully worked out in the five-year plan and basically realized in the period of time up to 1990. Of course, these questions should also be reflected in the draft for the 1985 plan;

--a consistent reduction beginning with the first-year class in 1986 over the course of 11 years of the maximum size of 1st-year to 9th-year classes to 30 persons and 10th-year to 11th-year classes--to 25 persons. According to conducted preliminary calculations for the accomplishment of this most important measure for raising the quality of education, it will be necessary to set up room in the schools for several million additional pupils. This is also true in the cities, inasmuch as the size of classes of the general educational school in rural localities is somewhat lower and in cities above the new norm of maximum class size;

--creation of conditions for extended-day groups and single-shift operation of schools, which also will require significant capital investment. It should be stressed that the solution of this problem requires particularly big efforts in the republics of Central Asia because in these republics many pupils of day general educational schools study in a second shift at the present time. Thus if on the average for the country 77.5 percent of the pupils of day city schools study in the first shift in city, the figure for Turkmen SSR is only

63.7 percent, in Tajik SSR--64.2 percent, in Kirghiz SSR--65.7 percent, in Kazakh SSR--66.1 percent and in Uzbek SSR--68.9 percent.

Things are somewhat better in rural localities when it comes to shifts. Here 82.8 percent of pupils of the schools study during the first shift, but in Tajik SSR the figure is only 61.8 percent, in Kirghiz SSR--62.5 percent, in Turkmen SSR--65.8 percent and so on.

In order to solve the problem, it will be necessary to increase on the average for the country the number of pupils' places in schools by more than 20 percent and in Central Asian republics—to build additional spaces equal to a third of the existing school space. Of course, this problem may be solved gradually rather than in the course of a single five—year plan. Its solution will require careful working out of the size of capital construction of schools, especially in the Central Asian republics and to make sure that the shift factor of studies is systematically reduced from year to year.

Serious and effective measures will be adopted for developing the material base of labor training of school children; the creation in the necessary number of training shops and sectors at enterprises and organizations, interschool educational production combines, school and interschool educational and educational production shops, schoolrooms for labor training, educational and experimental sectors, auxiliary farms, permanent labor and rest camps, field camps for pupils' brigades and school forestry areas as well as construction of quarters for the organization of labor training and socially useful productive labor of pupils.

In accordance with reform requirements, a particularly big contribution is called upon to be made by industrial enterprises and organizations in the creation of a material base for labor training and productive labor of school children.

"For the organization of productive labor of senior pupils, it is planned, for example," General Secretary of the CPSU Central Committee Comrade K.U. Chernenko pointed out in a speech at the April (1983) Plenum of the CPSU Central Committee, "to set aside or create in different sectors of the economy several million workplaces equipped with modern equipment. The question, comrades, is put namely thus. And Gosplan is to organically add this big initiative to the basic directions of economic and social development of the country during the 12th Five-Year Plan and up to the year 2000."

It will be necessary to solve all these questions in the course of preparation of drafts of annual and long-term plans, to work out concrete proposals on developing a material base for labor training of school children, to strive to involve capital investment for industrial and agricultural construction and to designate concrete targets in drafts of plans of economic and social development. This work will have to be conducted from the bottom to the top, that is, from the base enterprise, industrial and agroindustrial association to USSR ministries and departments, the USSR Ministry of Education and Gosplan USSR.

Much work lies ahead for securing full satisfacation of the needs of the population and preschool institutions.

In Basic Directions, the task is set to make wider use of the possibilities of state and cooperative enterprises, sovkhozes and kolkhozes for the construction, repair and equipment of educational buildings and dormitories.

In rural localities, the construction of general educational schools is done with funds for the sector "Agriculture" and with funds of kolkhozes in conformity with targets specified by the USSR Food Program for the 11th and 12th Five-Year Plans.

Things are more complex in the cities. Despite granting of the right to USSR ministries and departments and enteprises and organizations to allocate for the construction of educational facilities a part of the capital investment designated for production facilities, the construction of school buildings and especially children's preschool institutions with the means of the these funds is being conducted on a very small scale. Educational organs must in every way possible activate work in this direction.

There should be pointed out in this connection an important initiative of the AUCCTU--expansion of the participation of trade unions in organization of extraclass work with pupils. Measures worked out by the AUCCTU for 1966-1990 contain a concrete program of organization at the facilities of clubs and extraschool institutions at place of residence of an additional 100,000 groups and amateur associations for school children and, at facilities of general educational schools operating on one shift, the opening of 16,000 children's and juvenile clubs with a total coverage of 4.8 million school children, an increase by 1990 of involvement of pupils in organized forms of recreation and trade-union camps of various type of up to 22.7 million persons and so on.

In addition to trade-union organs in the accomplishment of measures worked out by the AUCCTU, educational organs and pedagogic collectives have the duty of taking direct part in this.

It is not necessary to prove the importance of developing a network of sanatoriums and preventoriums of institutes for the advanced training of teachers where pedagogic personnel in addition to upgrading their skills can receive skilled medical assistance and the necessary training. The experience of the republic institute for the advanced training of teachers of Moldavia in the organization of such a sanatorium and preventorium deserves broad dissemination. We can also welcome the initiative of the AUCCTU in alloting funds for the development of a network of such institutions during the 12th Five-Year Plan.

Education organs need to provide appropriate proposals in draft plans in order to secure the allocation of material resources and to organize the construction of sanatoriums-preventoriums at institutes for the advanced training of teachers.

Carrying out of all the tasks of development and strengthening of the material and technical base of education must be carefully thought out in draft plans of the sector's development, first of all in "Basic Directions of Economic and Social Development for 1986-1990 and for the Period to the Year 2000," work on which is now coming to an end and in the draft of plans for the 12th Five-Year Plan, which have to be worked out.

"Real enterprise is required in the compilation of plans and in their consideration," Comrade K.U. Chernenko said at the April (1984) Plenum of the CPSU Central Committee. "... But when the plan has become the law, it must be respected, observed and strictly fulfilled."

Unfortunately, in a number of union republics, plans are not fulfilled from year to year for the startup of new school buildings, children's preschool and other educational institutions.

Thus whereas in the country as a whole in the first 3 years of the 11th Five-Year Plan, the plan of startup of schools with state capital investment was fulfilled 100.1 percent (2,637,000 places were made available), including in 1983--104 percent (826,000 places were made available, in Tajik SSR the plan was correspondingly fulfilled only 87 and 81 percent, in Turkmen SSR--95 and 99 percent and in Kazakh SSR--90 and 92 percent.

The plan of startup of children's preschool institutions with state capital investment was fulfilled in 1981-1983 only 90 percent (1,306,000 places were made available), including in 1983--98 percent (457,000 places were introduced), but in Moldavian SSR the plan was correspondingly fulfilled only 84 and 88 percent, in Kazakh SSR--80 and 95 percent and in Azerbaijan SSR--73 and 96 percent.

From such violations of plan discipline it is necessary to derive the most serious practical conclusions and to learn to completely fulfill plans of capital construction of general educational schools, children's preschool institutions and all other educational facilities.

In the construction of educational facilities, many defects and unresolved problems exist as pointed out in the decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning, Organization and Management of Capital Construction." Defects are allowed to occur in planning of capital construction; accountability of clients as well as of contracting organizations of construction ministers has been weakened for the fulfillment of targets relating to the startup of educational facilities in prescribed time periods. Frequently the time of their construction significantly exceeds the norm and often effective use of capital investment and improvement of the financial and economic indicators in construction are not secured.

Thus during the current year, as in preceding years, the target is not being fulfilled for the startup of children's preschool institutions in the first half of the year in an amount comprising not less than 40 percent of the annual plan target. In the current year, for the first half of the year the startup of these institutions was planned on the average 28 percent and in

Turkmen SSR--12 percent, Georgian SSR--13 percent, Estonian SSR--14 percent, Azerbaijan and Kirghiz SSR--18 percent, Latvian SSR--26 percent. In Tajik SSR. startup in the first half of the year is not at all provided for. For organizations of the USSR Ministry of Power and Electrification planned startup was 26 percent, the USSR Ministry of Coal Industry--13 percent, the Ministry of Chemical Industry--31 percent, the Ministry of Fruit and Vegetable Industry--29 percent and so on. Such unsound planning is one of the reasons for nonfulfillment of annual plans of startup of children's preschool institutions.

For many years, the requirement of startup of school buildings by the beginning of the school year has not been fulfilled. In 1983, as of 1 September, for example, only 77 percent of the annual program's schools had been started up. This most serious defect in construction of schools is the consequences of low assimilation of capital investment allocated for school construction at the beginning of the year. Thus for the country as a whole, in the first half of 1984 only slightly more than one third of the year's limit of capital investment for school construction was used. Of course, it is difficult to use in the two months remaining before the start of the new school year two thirds of the capital investment. As a consequence of this, the startup of a number of schools has been continuing even after the start of the new school year.

The construction of schools in Kazakh SSR lags as in past years. In 1984, the construction of schools scheduled to open is being carried out unsatisfactorily by organizations of the Kazakh SSR Ministry of Rural Construction: at Leninkoly Sovkhoz in Zerendinskiy Rayon of Kokchetav Oblast--for 192 pupils; at Sovetskaya Rossiya Sovkhoz in Kustanayskiy Oblast--for 192 pupils; in Tselinogradskiy Rayon of Tselinograd Oblast--for 320 pupils; at Kazgurtskiy Sovkhoz in Lengerskiy Rayon of Chimkent Oblast--for 1,176 pupils; at Sovkhoz imeni Khadzhi Mukan in Bugunskiy Rayon of Chimkent Oblast--for 464 pupils and so on. Construction is proceeding just as badly of a number of schools in North Kazakhstan, Turgay and Ural Oblasts.

For the elimination of such defects, an obligatory rule should be the creation of reserve stocks, early carrying out of zero-cycle work so as to turn over the "key" to a newly constructed facility by 1 September.

Positive experience of organizing school construction has been acquired at a number of union republics: in the RSFSR, the Ukraine, Georgia, Armenia, Moldavia and others. Here the construction of schools is always at the center of attention of party and soviet organs. Education departments systematically monitor progress of operations at each construction projects and adopt timely measures for bringing up the laggers. It is important to more actively adopt this experience.

It has also become necessary to increase the capacities of construction congracting organizations of the Ministry of Rural Construction in Kazakhstan as well as in a number of Central Asian republics where in accordance with the requirements of the reform and with consideration of the demographic situation there is to be a sizeable increase in the volume of school construction during the 12th and subsequent five-year plans.

All interested ministries, departments and organizations are under the obligation, with full awareness of their responsibility to the state, to adopt the functions of monitoring both the course and quality of construction of educational facilities and the fulfillment of plans of putting them into operation—such a conclusion has to be made from an analysis of the present state of construction work.

The importance of school construction in rural areas should receive special emphasis. A rural school is not only a school building but in the majority of cases it also includes attached to the school a boarding house, dwellings for teachers and educational production shops and a garage or an open-sided shed for agricultural equipment. This is why in monitoring school construction it is necessary to take into consideration how requirements in regard to its comprehensiveness are being carried out.

In rural localities, it is important to ensure the rational location of a school network, to rightly plan where, with what capacity and according to what standard plan a new school building should be constructed, what existing schools should be modernized, what lacking buildings to be added existing ones and to those left for the schools' future. Plans of capital construction of schools must be worked out with obligatory consideration of plans of rationalizing the network of general educational schools approved in the prescribed manner for each rural rayon.

Rural reconstruction is connected to the erection of more modern, well-ordered school buildings meeting all requirements for good organization of training and educational work. At the present time among existing model plans, there are more than 150 of them of varying capacity for construction in rural areas. The number of model plans practically satisfies the needs of all regions. But cases are still to be found of a not carefully thought out approach to tying in of model plans to the concrete conditions of construction. A portion of the schools from (4 to 10 percent) is being built according to obsolete plans, long excluded from existing model plans. This is most characteristic with respect to a number of rayons of Turkmenia, Azerbaijan and also the Ukraine.

Frequently in rural areas plans with capacities significantly smaller than the anticipated contingent of pupils are secured. The school increby is doomed in advance to two-shift studies. It also happens that a school is erected in which the number of pupils' places significantly exceeds the anticipated contingent of pupils. As a consequence of this, the newly constructed schools operate inefficiently, with some classrooms and other spaces being left unused.

It is necessary to arrange things in such a way that the decision on construction of a school and the employment of this or that model plan are adopted with the consent of education organs. Rayon and rural soviets of people's deputies are called upon to constantly effect coordination of the efforts of education personnel and those of construction organizations aimed at the successful fulfillment of school-construction plans.

The economic side of construction should be under constant control. The fact must not be considered normal that in recent years the cost of a pupil's place has grown significantly.

The increase in the cost of a place has occurred not only because of use in construction of more modern model plans but also to a considerable degree as the result of a sharp increase in the cost of correlating model plans. The average percentage of the cost of such correlation actual reaches in a number of union republics 130-150 percent instead of 30-40 percent according to the norm.

The significant diversion of the capital-investment volume for the sector "Education" is not by means of direct allocation. The cost increase is occurring primarily due to the fault of clients and project planning organizations, which in a number of cases allow in the selection of sectors for construction the inclusion of costs for construction of main engineering water-supply, sewerage, heat-supply, electric-power supply and other lines. This is most characteristic in the construction of education facilities in rural areas.

Today, when in conformity with the school reform, the volume of construction of educational facilities is being significantly increased, it is necessary to adopt concrete measures everywhere for the elimination of the stated defects and to more effectively utilize capital investment allocated for school construction. In this connection, local soviets of people's deputies are called upon to display more effectiveness and initiative.

It is also necessary to increase control over the quality of performance of construction-installation and finishing work. Up to now cases have still been frequent of accepting school buildings with defects in workmanship.

For strengthening of the material-technical base of general educational schools, the preservation of existing buildings in a good condition is of major importance. An inventory of educational schools buildings carried out by the USSR Ministry of Education showed that roughly 20 percent of the school buildings require capital repair. At the same time, monetary sums allocated in recent years for capital repair have been used not as directed. It is necessary to strive determinedly to have allocations for capital repair used only as directed. It is impossible not to realize that capital repair of school buildings is just as important as new construction.

It is pointed out in Basic Directions of School Reform that new plans of educational buildings and construction standards have to be worked out that take into consideration present-day needs of the training-educational process. In conformity with these instructions, the USSR Ministry of Education together with the USSR Academy of Pedagogic Sciences is working out while taking into consideration new model educational plans for the 11-year general educational school initial data and requirements required for determining the list of types of buildings and calculating the constitution of the floorspaces of their buildings. But targets will be established on their basis jointly with the State Committee for Civil Construction and Architecture attached to

Gosstroy USSR for working out a new series of model plans of buildings of schools, educational production combines, educational production shops and also annex units for existing school buildings.

Prior to working out of new model plans, presently existing model plans should be employed during 1984-1985. The USSR Ministry of Education issues such lists once every two years. Lists of model plans effective as of 1 January 1984 contain 215 plans of schools of different seating capacity for all climatic zones of the country. At many of them, space has already been provided for preparatory and for future first-year classes for 6-year old children who will be studying in the 11-year school. The list also includes 72 plans of annex units, 10 plans of educational production combines, 207 plans of childrens nurseries and kindergartens, 21 plans of different extraschool institutions and others.

Large-scale measures are being carried out in our country for equipping general educational schools with educational visual aids, teaching equipment and furniture. It is enough to say that in 1983 schools were supplied with educational visual aids and teaching equipment valued at 210 million rubles and furniture valued at 168 million rubles. These are significant allocations even on the scale of our country. They make it possible to strengthen the material-technical base of schools on a planned basis.

It should be noted, however, that insufficient concern is shown in a number of regions in regard to providing schools withnew modern instruments and equipment, including, for example, language-record booths for study of the Russian language at national schools.

Cases continue to occur at schools of accumulation of above-norm equipment, especially technical training equipment and demonstration apparatus. At the same time, a number of schools lack the necessary assortment of visual aids and teaching equipment, particularly for carrying out laboratory work and practical training in accordance with educational programs. At some schools, the new equipment (language-record booths, control devices and so forth) are not installed for a long time and are not used. Adequate measures are not taken for setting up repair of instruments and apparatus that have gone out of order. It is necessary to install order in this matter, including turning over of excess teaching equipment to schools in need of it.

Economy and thrift are what one should be guided by in providing schools with teaching equipment and maintaining it in working condition.

Defects in the material-technical equipment of schools and in the use of existing teaching aids and technical means of training continue to occur as a consequence of the fact that educational ministries of union repulics, departments of education and heads of schools do not provide supervision and control at the proper level and are not concerned with raising the responsibility of teachers for increasing effectiveness of training and education of pupils by means of methodologically proper use of modern teaching aids.

Under the conditions of the reform, raising of demands of pedagogic collectives for rational use of teaching equipment as well as for wide-scale dissemination of valuable experienced acquired by the best teachers and collectives becomes particularly urgent.

In fulfillment of Basic Directions of Reform of the General Educational and Vocational Schools and decrees of the CPSU Central Committee and the USSR Council of Ministerson the schools, concrete measures will have to be implemented on strengthening and further developing the educational-technical base of the general educational school. Work is already being conducted with ministries and departments that have been assigned targets for developing and producing teaching equipment and visual aids. In particular, basic questions relatingto parameters and technical characteristics of new training aids and equipment have been coordinated. Thus the makeup has been more precisely determined with the USSR Ministry of Machine Tool and Tool Building Industry of the composition of sets of deficit metal-cutting, measuring and electrical equipment at the location of animal husbandry and mechanization and electrification of animal-husbandry farms. Production and deliveries of this equipment will begin in the fourth quarter of 1984. Measures have been specified for expanding the production of other types of teaching equipment relating to labor training and vocational orientation.

Special attention is directed to providing schools with teaching equipment on fundamentals off electronic computer and microprocessor technology. Schools are already being sent microcalculators and sets of electrical equipment for them as well as other aids. Questions have been resolved with the Ministry of Radio Industry and the Ministry of Communications Equipment Industry on introducing electronic computers of the Agat type into production in an assembly with televisors as well as with alphabetic printing devices. The deliveries of electronic-computer and microprocessor equipment for the equipment of teaching classrooms will beginning in a quarter of 1985.

A plan has been coordinated with industry for development and introduction into series production of 204 designations of new teaching equipment. This plan was formed while taking into account the requirements of Basic Directions of School Reform on increasing attention with regard to practical and laboratory studies and demonstration of the technological use of laws of physics, chemistry, biology and other sciences.

For the purpose of providing teaching work with 6-year old children with teaching aids in addition to the 20 designations being currently produced, in 1985 another 5 designations of visual aids and technical equipment will be developed and introduced into school practice.

Production has been specified of technical and other teaching aids for Russian-language classes in national schools as well as for esthetic education and all-round physical development of pupils.

Measures are being implemented for raising the quality of the equipment and furniture that is being produced.

"Now it is necessary to think," Comrade K.U. Chernenko stressed in a speech at the April (1984) Plenum of the CPSU Central Committee, "of the fact that the ideas of the reform are fully embodied in practice and do not remain on paper. The main thing here is to provide a solid material and organizational base for all the work relating to transformation of the school."

The large-scale problem of further improvement of the general educational school must be reinforced with effective measures for strengthening its material-technical base. The efforts of the USSR Ministry of Education and those of union and autonomous republics, local education organs, heads of institutions and all educational personnel must be directed to the solution of this task.

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# USSR PEDAGOGICAL ACADEMY PRESIDENT INTERVIEWED

Moscow LITERATURNAYA GAZETA in Russian 5 Sep 84 p 10

/Interview with M. Kondakov, president, USSR Academy of Pedagogical Sciences, by N. Loginov, LITERATURNAYA GAZETA, reviewer: "Learning is Difficult....' Why?"; date and place not specified/

/mext/ But what do we really understand by the term "labor education"?
Why did the previously conceived polytechnicalization of the school not yield the anticipated effect?
Where do children get a scornful attitude toward simple physical labor?
Why is it that "poor" and "good" students do not always turn out that way in life?
Who is a untypical schoolteacher?
Is the struggle against "percentomania" not giving rise to a new "percentomania"?

The answers to these and other questions are sought below by the LITERATURNAYA GAZETA reviewer and the president of the USSR Academy of Pedagogical Sciences.

Question The first question is somewhat of a side-issue. Why has the Academy of Pedagogical Sciences been situated in such a primitive (albeit new) building "made of concrete and glass"? After all, this is a pedagogical council, an assembly of the country's most learned educators. It seems to me that the architects would have been interested in creating an original plan for such a special institution.... And the city would have known its own "children's" academy.

[Answer] The architects did draw up a very interesting plan for us. But, alas, the city, management, finances, the plans.... There are urgent construction projects, and those which are "not very" urgent. We did not come under the former category.

[Question] But are there any prospects for the future?

[Answer] Certainly. We have not lost hope.

Question Now about the schools. If we may sum up the readers' responses by mail to the school reform, the basic question would sound like this: but what, after all, do they have in mind by the term "labor education" of the children? Are they talking about a workshop in a plant (or factory) to which you will lead the schoolchildren and say: learn this occupation? What if you spend quit quite a bit of money on instruction, and then the graduate simply will not go there after school has been completed? Or will the adolescent learn to work with his hands: to whitewash a ceiling, stitch shoes, to repair things, plane, solder (I am citing suggestions from the readers' mail), to drive motor vehicles, or cook food? That is, will they learn things which are always suitable in life? By the way, we ought to agree right away to limit our conversation on this topic merely to urban schools; rural children have their own things to study in the labor lessons.

[Answer] To reply briefly: I would like to give the schoolchild one and the other. The most naive desire here is to place the problem within rigid constructs and solve it in a uniformly simple manner: only a workshop, only this, one or another specific occupation (1t is so necessary to the given rayon or city!), whereas the interests and the inclinations of the children are not paid attention to. No, that will not happen. The individual personality of the schoolchild, his capabilities and freedom to choose an occupation -- these are the basic parameters in this matter. At present, therefore, themain thing for us is to create a PROGRAM OF LABOR INSTRUCTION /in boldface/ on a scientific basis. This is an entire system of pedagogical actions, directed at developing work habits among schoolchildren. They must familiarize themselves with working materials, learn how to use the simplest tools, etc. But by the end of their instruction in school they must also do some work on the production line and gain an understanding of what that entails. They must turn out products and earn money! The present-day graduates of the ten-year school have only a murky knowledge of how this is done. The vast majority have not yet earned a single ruble, and, therefore, the occupation of worker evokes unjustified apprehensions among many of them: will I be able to cope? will I be over-worked? won't I mess up my own future? Wouldn't it be better to become a laboratory assistant or a secretary -- a type of situation which they are accustomed to, almost like being in school. And at home these children are called "clumsy." They have no bent for taking care of themselves, for fixing up and repairing the necessary things. They do not even know the prices of things. These are the kinds of shortcomings which must be taken into account and overcome in the future program.

[Question] What lies at the foundation of your program?

[Answer] Experience. All the best which has been discovered by the schools. Everything constructive, creative, and keen in the practice of labor education. We have thousands of such examples. The middle-level grades are of particular interest to us. Adolescents are fond of physical labor and are interested in all its aspects. To seize upon this interest, to succeed in teaching the children some crafts, to "untie" their hands—that is the goal of this program. In the senior classes there will be a motivational sphere to be changed among the schoolchildren, but their hands will already be "intelligent." Then the children need to choose jobs which are closely related to their possible occupation.

[Question] But just what kinds of manual work for the middle-level grades do you have in mind?

(Answer) First of all, entrance to the educational-production combines (UPK's) must be opened up for the pupils of the senior classes. It is necessary to lower the age of those to be accepted for auto-mechanics and other such technologies. But each school must decide what is to be studied in its own workshops. It is easy to say that "we must inoculate them with industriousness." This is a commonplace truism. But socially useful and, the main thing, interesting types and forms of work for 30 million children cannot be found from "on high," from the office study window of the academy or ministry. The party documents on the reform state that the ispolkoms and enterprises, in conjunction with the school directorates, are obliged to find jobs for schoolchildren.

...I frequently recall one Moscow school, where the labor teacher began to make a metal model of the Tsar-Cannon. This model was almost a work of art, and it found a market. With what attention the children labored on it! They succeeded in mastering such a number of operations and acquired such skills and habits as could not be reflected in any single program....

Question The teacher had set an adequate task for the children... I too know such a labor teacher in a certain Moscow school--Mikhail Ivanovich Izotov. He does not make Tsar-Cannons but something else; still that is not important. Whatever he might be making, the children gaze at him as if enthralled. As a personality he is attractive for the children, as if he has some sort of magic at his command. His mild-mannered request sounds like an order for a child. And his schoolchildren are just as "handy" as he is himself....

[Answer] Such are the kinds of persons who should be recruited for the schools! Like Izotopov or like my teacher, Mikhail Yakovlevich Gorodnichiy. He lives in Tula Oblast, and he and I correspond to this very day. He is the most desired guest in my home. Just imagine him in the 1930's--a woodworker in mahogany-young and elegant, as he takes up his master's plane, and the wood sings in his hands. Together with him we used to make unique things out of wood; it was impossible to chase us out of the woodworking shop. Our parents used to bring us food there, and nobody demanded that we leave the shop. What did we make? Billiard cues, little boxes; but these were not only necessary things but also beautiful objects. This labor teacher inculcated a sense of aesthetics in us....

[Question] With Izotopov there is always a factor of play in the work. And this is very necessary for children; they cannot toil away dully like slaves....

[Answer] And Gorodnichiy would distract us to the point of self-forgetfullness. He used to show us the limitless possibilities of human hands and such a simple material as wood. Do you know with whom I intentionally compare him? With Colas Breugnon...

[Answer] Is it not because the previously conceived polytechnicalization of the schools was ineffective that such a type of labor teacher has remained on the sidelines? And that a well-planned search for them was not organized? Many casual persons came into the system without the capacity to gain authority among the schoolchildren. Is this not the case?

[Answer] Yes, most likely, that is one of the reasons....

[Question] No matter what kind of a wise program for labor education you draw up, it cannot be implemented without a teacher who works creatively.

/Answer/ Of course, that is true. Here it's the same as with lessons in literature and history. We reduce the hours devoted to the creative work of one writer and add them to another, but if there is no glowing, inspired teacher in the classroom, the children will be bored even with an ideal program. We need to seek out and train a new type of labor teacher. Special departments have now been expanded at the pedagogical institutes. But who should be sent there? It would be good not to just take persons who come in from off the street but rather upon the recommendations of schools and enterprises. The party and trade-union organizations ought to seek out gifted children and direct them into educational training. And the schools must show concern for themselvesmust discover talented pupils and prepare for a "changing of the guard." You know, we frequently talk about the country's intellectual potential, and we call for talented physicists and mathematicians to be sought out from their younger days. Outstanding labor teachers, in love with their own work and capable of transmitting their own mastery to the children, are no less central a potential. Take the Baltic republics, for example: what high standards of work, what a respectful attitude toward manual skills! Thousands of schoolchildren take part every year in exhibits of simple things which they have made themselves: mittens, items made of wood, metal, inlaid work, and applique work, and everything done at a high level of artistic work. There is one other important thing: a brilliant organization of labor is necessary when working with children. We adults can, of course, understand and explain if a matter is cut short due to some one stupid bungler. But when children from a city school are taken by bus out to plant cabbages, and the planting areas turn out not to be ready, then the children are stormily indignant. They are "maximalists," and such instances inflict harm on their moral upbringing.

Question Our next question concerns the status of the pupil in school. Readers are disturbed by the fact that the so-called "good person" in the class is not considered such if he studies at an average level or if he is not fully attentive. Excessively narrow criteria are being applied to the personality of the pupil in school. But look at what we lose because of this: an outstanding worker does not like to remember school because they belittled him there for his mediocre grades....

Answer/ Yes, such things are unfortunate. In school the "good pupil" is the one who has written a good composition, solved a problem quickly, or has performed at a concert. But the little girl Anya, who sews her own dresses, is not noticed. I recall conducting a pedagogical program for televison where we were showing housekeeping lessons at one of the schools. Suddenly I caught sight of a little girl hiding behind the backs of her friends. I stopped the filming and asked her what was the matter. It turned out that she was embarrassed to be seen cooking cutlets on the television screen. Where is it that even our children get this scorn for simple labor from? I think that here too the school is to blame. We are not inculcating a feeling of pride, or at least simple satisfaction, in a job well done. And, as a consequence of this, the school graduates have a distorted idea about their place in life....

Question Someone who has not attended a VUZ feels that his pride has been wounded, that he is a second-class sort of person... Even though this is not really so, he, nonetheless, feels that way. The kids themselves find various sorts of justifications for this, and their moods are more or less optimistic. But here the adults around them are making long faces: the beginning of your life, they say, has been unsuccessful. Such "condolences" are transmitted to the young persons themselves.... But look now, five or ten years have elapsed. Everyone has become what they have become. And then people write letters to the editors stating the following: "the list of good and bad persons in life does not coincide with the list of good and bad pupils...."

[Answer] I understand. But there is a covert hint here that outstanding pupils in school do not then show themselves to good advantage. There has been a lengthy campaign in the press against outstanding pupils. I cannot agree with this. And I always defend them. I am convinced that the absolute majority of outstanding pupils manifest their industriousness and persistence in life as well. And the exceptions merely prove the rule, as is well known. And as regards the so-called "labor" pupil, I repeat, the schools are insufficiently attentive to him. Included on the list of "labor" pupils are, at times, the unruly personality, the squabbler, the slow-witted person, the one who is excessively mobile, and mainly, those with which you began your question -- completely adequate children (in the future they will be good production workers, office employees, normal fathers and mothers), who do not grasp the stars from the sky, or, to put it succinctly, those who earn the grade of "3." Yes, the schools have not been fond of those who earn the grade of "3," ever since the time when a "3" meant "mediocre achievements." But, of course, at that time the schools were teaching only those who desired, thirsted, and dreamed of studying rather than going to work. The remainder either took their seats behind a tractor or stood behind a machine tool, while on questionnaires they used to write "Education -- Seventh Grade." Twelve years ago a law was adopted making secondary education compulsory for everyone, and all those young persons who wish to begin their own independent lives earlier (and this includes millions of young fellows and girls) have had to remain behind at their school-desks. Your newspaper, together with others, correctly wrote that it was necessary to make major changes in the contents of the programs, the methods of teaching, and even the attitude towards the "3" as a "satisfactory" grade. Of course, these millions of young people, as they say, were not jamming into our schools to become students. Their inner mind set was to go to work. Family, upbringing, insufficient capacities for study--all these factors spoke in favor of such a decision. But the state, the society adopted a law the intent of which is a higher manifestation of humanity: wait a while, it said, don't be in such a hurry, try to get some more from school, study the foundations of the sciences, accumulate knowledge and skills, and then choose an occupation, with greater consideration given to your own inclinations and character. This law is our common pride and victory. But...social awareness does not change as quickly as a law is written. The number of "unsatisfactory" pupils at their school-desks has sharply increased, and the teacher, as in previous years, shames them, scolds, and reproaches them for laziness and idleness. And the methods of teaching (even those with which the academy succeeded) have not made the transition into practice so quickly. And the programs still remain complicated for the present-day average pupil, even though the specialists are continually working on these programs. To put it more briefly, your reproaches are

correct, but don't forget that what we are talking about is such a complicated creative phenomenon as instructing the masses of young people. If one could merely by decree require that the teachers "be fond of" all their pupils regardless of their achievements! Alas, such a decree would not work. Painstaking work is needed: so that the children become interested in studying, so that the programs are made accessible to all categories of young people, but that, in connection with this, the most capable ones not be held back (you are probably also getting letters to the following effect: if the teacher "keys" on the average pupil, doesn't the talented pupil then suffer?). The school reform provides us a great deal of scope along these lines, and future prospects are being opened up. What is, in essence, a doubling of the labor lesson? It is a raising of the prestige of the "subject" itself--Labor! It is a raising of the status of that pupil who succeeds in this subject in an outstanding manner. It is a leveling out of the vocational school so that it should not be "worse" than the regular school but simply another form of instruction. All this work is only just beginning now, and we must not expect quick successes....

Question That is understandable. Nevertheless, it is a pity that the schools have been so slow to turn their faces, that pedagogy still remains "gloomy," and that teaching remains factological and authoritarian. As a result, we have yet another generation graduating from school with a feeling of getting out from under a load, pleased that unsatisfied teachers will no longer be picking on them. Can you understand the difference between an irritated mother and an unsatisfied school teacher? The former can be embraced and calmed down, while there is no salvation from the latter....

[Answer] I understand. But why no salvation? Learn the lesson and you will make her happy. But you do not have this in mind. Nevertheless, this is that same lowered authority of the pupil which he is incapable of raising by temporary successes. And he loses heart. Well, of course, ideally a school compares not the pupils between themselves but rather each child "today" with what that same child was "yesterday." This is also the same individual approach to the pupil which the academy and the Ministry of Education has been requiring from schoolteachers for many years already. But if Shalva Aleksandrovich Amonashvili understands this even without our requirements -- he and his associates are educating each pupil individually !-- as do also other good pedagogues, the ordinary teacher says the following: I would not succeed; I can scarcely cope with the program as it is, much less than with an individual approach...! The goal is one thing, life and practice is another -- the "subject" teacher receives six or seven regular answers in the lesson, and then they proceed further in the program. And let the family perform the "rearing" part of education, says such a teacher, without understanding that he is also "rearing" as soon as he steps across the threshold of the classroom. Let me cite as an example for all the well-known Moscow literature teacher, Semen Abramovich Gurevich. I am fond of visiting him at home and browsing about in his personal library, as well as in his pedagogical archive (by the way, a teacher's archive is a special topic; at Gurevich's you can find material regarding any pedagogical situation!). And so, a recent instance. He had a pupil who did not have much liking for mathematics. "Well, now, think, who among the major writers seriously studied mathematics; I can cite four names for you.... The pupil was intrigued; he dug up the material and found 20 names. He became attracted by the topic and began to study it with interest; and do you know what he became? A mathematician. This is an example of how a teacher can stimulate a schoolchild's capabilities.

Question You and I are citing the names of the "beacons" in pedagogy, but most children study in ordinary classrooms, where a "2," even if he is only seven years old, has already become "guilty" because he is not keeping up....

[Answer] The reform has now demanded a radical change in the attitude toward creatively working pedagogues on the part of the school administration. Understand that in every group there is a nucleus of teachers who are seeking out new ways, and the school administration has not always encouraged them, valued them, or raised their authority. But for a school director is there really any more important task than stimulating a teacher's search and rejoicing over his discoveries and successes?

Question But directors are still too absorbed with economic concerns. And persons are selected for these posts who know how to renovate a school by a deadline. For them a non-typical teacher is an excess bother.

(Answer) That is so, but let's look the truth squarely in the eyes. In the immediate future we will scarcely succeed in fully unloading economic concerns from off the back of the directors, even though such a task has been posed in the party documents connected with the reform. Meanwhile, however, we must seek out for the post of director a person who combines both qualities. Organizational capacities as well as pedagogical ones. The director must be the first teacher in the school, the educator of the teachers, and not only know how to acquire the necessary amounts of brooms and paints for repairs.

Question/ Here's another question: at the present time new criteria are being developed for evaluating a school's activity. But, of course, even the surrounding population knows well which of two schools is the better one. So how is it that the RONO /Rayon Department of Public Education/ does not know?

[Answer] The RONO also knows. But it must not only know but hold the "indicators" in its hands. Here too formalism has gone on a spree, a fact which was sharply evaluated in the decree on the school reform. Quite often it is the weak school which has ideal documentation and occupies a position "not its own" i.e., is evaluated as a strong school in compilations and reports. We must overcome in ourselves this stubborn habit of judging live work by means of paperwork. It is interesting that the first efforts to root out formalism have engendered a new formalism. We are struggling against "percentomania," and here, like a little devil from a tobacco pouch, out jumps "percent of quality," the awkwardness of which is obvious to everybody from the minister to the teacher. A school is a complex organism, and to compare even two schools by means of any of these "percentages" is just like saying: Vova is worse than Serezha because he has one five-kopeck piece less. They are different persons, and characterizing them can only be done creatively, taking into account many parameters, one of which is the rate of progress. There is also the matter of evaluating a school -- this cannot be concluded in a single word or a single figure. It is impossible and incorrect, particularly in the light of the new reform, to judge a school by the number of students gaining admission to a VUZ, as has been suggested by many writers of letters sent to this academy. A school has the duty of training literate, creatively working personnel for all

sectors of the national economy and not merely for a VUZ. So far we cannot be satisfied by the level of literacy of the graduates, nor by their ability to nor by their degree of preparation in subjects of the natural sciences and mathematics groups. A school graduate will not necessarily enter a VUZ; he will be working at a machine tool, in a field or in an institution, but how responsible will his attitude toward his work be? Does he read? Is he expanding his horizons? Or is he not ashamed of his low level of erudition and does not wish to grow spiritually? In recent times it has come to be said more and more often that the main thing is that he be able to find the necessary data and be able to orient himself in the flood of information, i.e., that he "be capable of learning on his own." In principle, this is correct--it is impossible to know everything and encompass everything; nevertheless, upon graduating from school, the children should know the fundamentals of the sciences. With what concern Lenin used to speak about this! And his testament remains unwavering for us. But in calling for the pupils to learn how to merely "orient themselves in the reference books" there is hidden a certain lighter attitude toward learning per se. The fundamentals of the sciences, they say, are complex and awkward; just give pupils the "key" to learning. 1 do not agree. The only person who would use such a "key" to open up something new for himself would be a person who already knows quite a bit. But if a person graduates from school as an ignoramus, then at work he will remain an ignoramus. Do you see how many parameters are necessary for an analysis of a school's operation? And just how can it be monitored if we cannot find at least some kinds of quantitative indicators? The concepts of the "rate of progress" and even the "percentage," if you like, are not to blame, in and by themselves, for that showy pretentiousness about which we all are talking. The trouble lies in the striving to provide inflated figures. That is what we must fight against.

Question Understood, but so far there have been no particular successes achieved in this combat. Then again, you yourself, if you will pardon my saying so, have rather lightly treated the concept of the "key" to knowledge. Of course, this word is merely a figure of speech. What we are talking about specifically is arousing the activity of the pupil rather than "stuffing" him with the so-called fundamentals of science, like stuffing a goose with nuts. You know, the loosest concept is just these "fundamentals." Where are the boundaries? If they run imprecisely, obstacles arise, and the pupil cannot physically master the scope of the program, whereas the teacher cannot put sufficient effort into this scope. Here is your base for unrealistic reports and showy pretentiousness: they will say that everything is fine and even outstanding in their school....

Answer/ The scope of the program is likewise a fundamental concern of this academy. Staff members of the scientific research institutes have been working on what is the main thing and what is of secondary importance. But I would not place too much particular emphasis on the study load of the present-day pupil. On the contrary, they have become very lazy, in my opinion; we are raising an impossibly high number of idlers....

Question But you have often cited in your reports excerpts from poorly written textbooks, for example, those in geography. And we would add here history, biology, and many others. Readers often send us rebus-type puzzles from textbooks and ask us to figure out the meaning. And they ask whether the Pedagogical Academy is not merely engaging in the production of dissertations for internal consumption.

Answer That is an error! Very unfortunately, in the field of pedagogy few candidate's and an insignificantly small number of doctoral dissertations are being written. But take into account the fact that never before has the public paid such attention to the schools as they have now. Never before have parents looked so attentively into the textbooks of their children. This interest has been rising year after year. But who is to blame for the shortcomings of the schools? The Ministry of Education and the academy, of course! The hail of reproaches which is falling on our heads today could almost be considered the size of "groats," in comparison with that which will fall tomorrow unless parents come to know how their children are to be taught better. And so, what are we ergaged in? We write monographs, methodological pamphlets, and handbooks. Are they necessary? They are necessary for theoreticians as well as practical workers. The schools expect from us more improved programs, a radical improvement of textbooks, didactic material, technical means of instruction, etc. A teacher must constantly expand his own horizon. And these books, which help him to penetrate more deeply into science itself, he also expects from us. But the teacher is still in charge of the classroom, and it is he who educates the children. And he expects literature on this topic. The academy's presidium examines each research project within the following perspective: what innovation has the author contributed to the theory and practice of education. You know, a notebook on a teacher's desk is not a collection of commonplace truisms; it ought to enrich even the experienced pedagogue with new ideas. That is our greatest concern-a system of measures and actions which will ensure the upgrading of a teacher's skills. You are right in stating that the language of many textbooks and methodological handbooks remains stilted to this very day. Last year we in the academy decided to wage a frontal attack on what is called "pseudo-scientism." It has literally become a scourge in pedagogy. What is interesting is that it is not necessary neither to the institute's leadership, nor to the scientific worker himself, nor to the teacher-reader. But like a palsy it seizes upon the degree candidate or the young staff member as soon as he takes up his pen. Pedagogical ideas must be accessible and clearly expressed--herein lies their essence. If Makarenko and Sukhomlinskiy had not been able to write the way they did, their experience would not have attained such influence. If Shalva Aleksandrovich Amonashvili had not set forth his own ideas so emotionally and sharply, nobody would have known about him beyond the walls of one school or institute. A scholar-pedagogue who speaks poorly, who does not have the ability to make a clear report, has not made the grade as a scholar because a pedagogue is primarily a brilliant propagandist of his own ideas.

[Question] By the way, what can be listed in the active file of the academy for the time period which has elapsed since the adoption of the school reform?

Answer/ In other words, what have we succeeded in accomplishing? Already by the new academic year teachers had received our recommendations as to curtailing the program material as well as directives on which sections the children need to pay particular attention. Do you want examples? We are cutting back in the factological data in history, difficult-to-reach material on genetics, certain sections of differential and integral calculus in the mathematics courses. We have created a commission, made up of the best teachers, experienced methods specialists, and scientific staff members, who are now reading through attentively, page by page, all textbooks for the purpose of "shaking out" of them that which is superfluous, repetitive, and boring. Programs have already

been prepared for the 4-year primary instruction, and a list has been drawn up of the mass occupations for which the secondary schools will train children. A number of laboratories have been opened in order to, if I may so put it, liquidate the "computer illiteracy" of schoolchildren....

Question/ The reform requires that the academy be on the alert and the first to find fresh ideas which have arisen in practical work. Don't you have some sort of operational group which is light on its feet, if I may so put it? If they receive a signal, they could travel to the locality and extract the kernel of rationality....

Answer/ We are creating a special council for introducing experimental results. Qualified pedagogues will examine experiment after experiment. Let's say, by way of examples, the system of instruction and education of Karakovskiy, Shchetin, Karmanov, and Shatalov. What is their essence? What can be recommended to others? All the best things should be adopted by the school practice. I am now proposing the organization of creative evenings in the academy itself. We will be inviting 300--400 students each time so that the teacher can talk in detail about his own finds, and this material would not be lost. We are noting a great deal of this kind of thing now. Let's hope that we will be able to keep our fingers on the pulses of the school, the teachers, and the youth.

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### **EDUCATION**

## VOCATIONAL TRAINING EXAMINED IN LIGHT OF SCHOOL REFORM

Moscow PROFESSIONAL'NO-TEKHNICHESKOYE OBRAZOVANIYE in Russian No 11, Nov 84 pp 4-7

Article by L. Kostin, first deputy chairman of the USSR State Committee for Labor and Social Problems, doctor of economic sciences: "Vocational Training Under School Reform Conditions"

Text The school reform aims at raising the education and communist training of the growing generation of the Soviet people to a higher, new level and at significantly improving their occupational skills. The solution of this problem requires a considerable improvement in the afterschool vocational training of youth in the sphere of production. In connection with this the role and significance of the system of on-the-job vocational training of workers increase greatly. Right now this system plays an important role in providing the national economy with skilled personnel.

The Basic Directions of the Economic and Social Development of the USSR for 1981-1985 and for the Period Until 1990 set the task of improving on-the-job training and skills of personnel. A successful implementation of measures envisaged by the decree of the CPSU Central Committee and the USSR Council of Ministers "On Measures for Further Improving On-the-Job Training and Skills of Workers" (1979) is of great importance for the accomplishment of this task.

In accordance with this decree five-year plans for the training and retraining of workers have begun to be established and most ministries and departments have worked out and approved standards of the numerical strength of workers engaged in personnel training and standards for the establishment of an industrial training base and have set the assignments for expanding it. The methodological support for the system of vocational training of workers is improving. The publication of textbooks and manuals is increasing. Measures for expanding the production of visual study aids, equipment and technical means of instruction are being implemented.

Extensive work was done by central departments. Fulfilling the decree, the USSR State Committee for Labor and Social Problems, the USSR State Committee for Vocational and Technical Education, the USSR Ministry of Finance and the USSR Central Statistical Administration jointly with the AUCCTU revised, with due regard for the new requirements, and approved all the basic standard and instructional-methodological documents. An all-Union review of on-the-job training of workers and a one-time recording of the numerical strength of personnel and of the state of industrial training bases were carried out.

Marked qualitative changes took place in personnel training. The proportion of workers, who underwent training according to the course and group forms of instruction, throughout the national economy increased from 58 percent in 1979 to 63 percent in 1983. Ministries and departments began to pay more attention to the formation of workers of broad specialization and the scale of teaching workers second occupations in schools for the study of advanced techniques and methods of labor increased. An improvement in the skills of brigade leaders and the preparation of their reserve were organized. As a result of all this work the level of workers' skills in all national economic sectors rose.

The implementation of the measures envisaged by the indicated decree of the CPSU Central Committee and the USSR Council of Ministers has contributed to the development of sectorial systems of vocational training of personnel and improvement in this work at many enterprises and organizations. This is well exemplified by the Moscow Machine Tool Building Plant imeni Sergo Ordzhonikidze, where an efficient system of training workers has been established. More than 30 percent of all the workers are trained and retrained and improve their skills here every year. The industrial training base at the plant has been brought into conformity with sectorial standards. A stable collective of shop organizers, teachers and instructors has been formed. Constant work on improving their pedagogical and methodological skills is done. All this has contributed to the fact that the enterprise constantly fulfills the five-year plan successfully, the entire increase in output has been attained through labor productivity growth and the proportion of output in the superior quality category has risen to 74 percent.

At the same time, there are significant shortcomings in the work on the fulfillment of the decree of the CPSU Central Committee and the USSR Council of Ministers. Some administrative organs and enterprises have not done the necessary organizational work, have not taken measures to improve the quality of training and education of workers and permit shortened periods of training.

A number of enterprises, including the Ufa Industrial Rubber Article Plant of the USSR Ministry of the Petroleum Refining and Petrochemical Industry and the Ufa Electric Lamp Plant of the Ministry of the Electrical Equipment Industry, do not pay sufficient attention to the vocational training of working women with small children and do not always give them the established benefits.

Some ministries, including the Ministry of Agriculture, the Ministry of Light Industry and the Ministry of Construction in the Far East and Transbaykal Regions, have not worked out sectorial standards of the numerical strength of workers engaged in personnel training and the Ministry of Power and Electrification and the State Committee for Forestry have not established standards for the creation of an industrial training base. A number of ministries have not set assignments for expanding it for subordinate enterprises and organizations and do not take proper measures for the production of visual study aids.

The necessary measures to improve the quality of research on problems of onthe-job training of workers have not been taken everywhere and, for example, in the USSR Ministry of Construction of Heavy Industry Enterprises and the USSR Ministry of Power and Electrification such research is not conducted at all.

Five years have passed after the publication of the decree of the CPSU Central Committee and the USSR Council of Ministers. New problems have arisen today. Therefore, it is necessary to profoundly analyze in every sector the state of affairs with the training and improvement in the skills of workers at board meetings and to determine specific measures to ensure the realization of all the envisaged steps.

Labor and vocational and technical education organs must increase their control over the performance of this work and give ministries, departments, enterprises and organizations the necessary assistance in the elimination of existing shortcomings.

The basic directions of the general educational and vocational school reform have set new tasks concerning an improvement in the training of skilled personnel for the national economy. The introduction of universal vocational education in the country in the very near future will require a reorganization of the system of on-the-job training of workers. As the training of workers in secondary vocational and technical schools increases and vocational education in general educational schools develops, on-the-job training of young new workers will decrease gradually. Therefore, retraining workers disengaged in connection with technical progress and individuals wishing for some reasons to change their occupations, as well as teaching workers second occupations and ensuring a planned improvement in their skills, should become the main function of the system of on-the-job vocational training of personnel in the future.

The retraining scale will be significant, which is due to the intensifying manifestation of the law of change of labor. With due regard for this ministries and departments should work out long-term plans for training, retraining and improving the skills of personnel and determine measures for the development and improvement of sectorial systems of on-the-job vocational training of workers.

Right now it is necessary to carefully study the problem as to the occupations in which the labor education of schoolchildren should be organized at subordinate enterprises on the basis of the provisional standard list of occupations prepared in schools and to take measures to create the appropriate conditions for the performance of this work. The arrival of young people graduating from general educational schools at a sector's enterprises and the level of their skills will largely depend on this.

In accordance with the basic directions of the school reform the USSR State Committee for Labor and Social Problems jointly with the USSR Ministry of Education, the USSR State Committee for Vocational and Technical Education and other ministries were instructed to significantly improve vocational

guidance work. Labor organs have been entrusted with the task of coordinating vocational guidance work in the country. These are fundamentally new and specific functions. We attach great importance to the development of the system of vocational guidance and increase in its social and economic effectiveness. We see in this an important lever in the further improvement in the management of labor resources. Right now all ministries must determine the plan of immediate actions for the development of vocational guidance work in a sector and directly at enterprises.

The brigade form of labor organization and stimulation raises serious problems before the system of on-the-job training of personnel. In connection with the extensive development of new types of brigades the need for training workers of broad specialization and teaching people already engaged in production second and third occupations increases sharply. Many enterprises have accumulated a great deal of experience in the organization of such work. For example, at the Magnitogorsk Metallurgical Combine 80 percent of the workers have two occupations and more. Most of the workers successfully combine them with their basic work. This has become one of the important potentials for increasing the efficiency of labor and improving the utilization of equipment.

Unfortunately, however, this is not the case everywhere. In the Ministry of Instrument Making, Automation Equipment and Control Systems and the Ministry of the Construction Materials Industry a little more than 2 percent of the workers are annually trained at courses for the mastery of second occupations. This work is poorly organized in the Georgian SSR, the Tajik SSR and the Turkmen SSR. Therefore, in every sector and at every enterprise it is necessary to profoundly analyze this matter and to develop, with due regard for the specific nature of production, lists of occupations recommended for combination, which should become the basis for teaching workers second occupations.

With due regard for production requirements for an expansion of workers' occupational specialization the USSR State Committee for Labor and Social Problems is revising the United Job and Wage Rates Classification Manual. This revision is to be completed basically during the current five-year plan.

Improvement in the work on raising the skills of brigade leaders and preparing their reserve is an important task. During 1984-1986 it is necessary to retrain or improve the skills of all brigade leaders and, subsequently, to do this no less frequently than once in 5 years. The educational base of courses for brigade leaders must be strengthened and these courses must be staffed with highly skilled instructors.

Throughout the national economy in 1983 only 20.8 percent of the brigade leaders were trained. Therefore, in order to fulfill the task set, it is necessary to increase the scale of training workers in courses for brigade leaders one and a half or twofold next year.

Attention must be paid especially to the organization of the training of brigade leaders at small and medium-size enterprises, which do not have the necessary base and contingent for staffing training groups. For their training it is necessary to establish regional courses at the base of vocational and technical schools, training centers and tekhnikums.

Work on an increase in production efficiency on the basis of the certification and rationalization of work places has expanded in national economic sectors recently. As practice has shown, certification makes it possible to evaluate not only means of production, but also the main element of productive forces—the man of labor, the level of his educational and vocational training and his social and labor activity. Certification of work places creates the prerequisites for more purposeful work on the vocational training of workers with due regard for real production needs. The task is to ensure a prompt retraining of workers, who, in fact, are disengaged in connection with the liquidation of inefficient work places, and a correspondence of the skill level of personnel to production requirements.

For the purpose of ensuring a unified and more correct approach to this matter, ministries and departments should work out sectorial methodological directives for the utilization of the results of certification of work places in the planning of the training, retraining and improvement in the skills of personnel.

A prompt training and retraining of workers for newly commissioned enterprises should be constantly in the field of vision of ministries and departments. A number of ministries have accumulated quite good experience in the performance of this work. For example, the Ministry of Tractor and Agricultural Machine Building determines the key construction starts of the planned period in advance and organizes the training of personnel for them. At the same time, an important place is assigned to training them at existing enterprises. Ministry of the Automotive Industry the training of personnel for construction starts has been organized in sectorial educational centers at the base of Volzhsk and Gorkiy motor vehicle plants. In the Ministry of Instrument Making, Automation Equipment and Control Systems base enterprises have been determined for these purposes in every all-Union association. As yet, however, there has been no marked improvement in ensuring a prompt training of workers for construction starts. As before, many ministries are oriented toward providing them with personnel basically through outside hiring. Ministries and departments must pay more attention to this important matter.

The scientific and technical revolution requires a periodic refreshment of workers' knowledge and production skills. In this connection an improvement in workers' skills acquires ever greater importance. A number of ministries and departments have developed and introduce systems of continuous vocational training of workers, which are the basis for a planned improvement in the structure of personnel and their occupational skill advancement. However, the level of this work in some sectors does not yet meet modern production requirements.

The scale of training throughout the national economy, as well as in a number of ministries and departments, does not yet ensure the established periodicity of improvement in their skills. As a result, at many enterprises the average category of workers is below the level of the jobs done by them. For this reason enterprises incur big losses as a result of rejects, nonfulfillment of output norms by workers, an incomplete utilization of equipment and an inefficient expenditure of raw materials, supplies and power resources. Therefore, at enterprises it is necessary to more extensively train workers in production and technical courses with a view to bringing the skill level of personnel into conformity with production requirements in the very near future.

The problem connected with training workers for the servicing and repair of complex modern equipment, on which the efficiency of its utilization depends to a decisive degree, is now critical. This requires a significant increase and improvement in the training of workers at specific-purpose courses.

The mastering by workers of all sectors of the techniques and methods of labor of advanced workers and production innovators in schools established for this purpose is an important means of increasing the efficiency of their work. Their effectiveness has been demonstrated by practice. Schools have received the greatest development in the USSR Ministry of Light Industry, the USSR Ministry of Construction of Heavy Industry Enterprises, the USSR Ministry of Nonferrous Metallurgy and the USSR Ministry of Ferrous Metallurgy, where from 8 to 10 percent of the workers are annually trained in them. However, even here the possibilities, especially for an improvement in the quality and result of effectiveness of training, are by no means utilized fully.

However, an underestimate of this form of improvement in skills, as before, is observed in some ministries. For example, in the USSR Ministry of the Timber, Pulp and Paper, and Wood Processing Industry, the Ministry of Machine Building for Animal Husbandry and Fodder Production and the Ministry of Machine Building for Light and Food Industry and Household Appliances in 1983 only 2.5 percent of the workers were taught advanced techniques and methods of labor. It is necessary to more fully utilize this important potential and to take measures to significantly increase the scale of training workers in such schools.

Economic education has become a widespread form of improvement in workers' skills in recent years. It has a number of courses. However, the course "Fundamentals of Economic Knowledge" remains the main one. A new program has now been approved and a textbook on this course is being published.

The improvement in the economic mechanism, wide introduction of cost accounting and the brigade contract and certification and rationalization of work places with a broad participation of the labor collective require universal compulsory economic education for workers and employees with specific examples of the operation of their enterprise.

Determination of the efficiency of various types and forms of training and improving the skills of workers is one of the important elements in the improvement in the mechanism of management of the personnel training system. For the time being this work is evaluated mainly according to quantitative indicators, but it is necessary to evaluate its effectiveness and social and economic results. However, the method of determining effectiveness has not yet been worked out completely. Here the final say rests with scientists.

Another important problem must be discussed today. It is well known that a certain part of the workers are not very concerned with improving their skills. In connection with this enterprises experience difficulties in drawing them into studies. Therefore, it is necessary to ensure a great dependence of workers' wages on their skill level. For this it is necessary to more fully utilize existing possibilities for stimulating an improvement in occupational skills, in particular additional payments for high skills and holding two jobs. For the time being these possibilities are utilized in an obviously insufficient manner.

Improving the quality and raising the efficiency of training, retraining and enhancing the skills of workers, as before, remain the main tasks facing the system of on-the-job vocational training of personnel. An improvement in the methodological support for this process is of great importance in their accomplishment. It has been slightly improved recently. Nevertheless, this problem has not been solved completely. At many enterprises and organizations there is a shortage of curriculums and often training is done according to obsolete ones. There are few good understandable methodological studies, which teachers, foremen and instructors need. This problem should be the object of constant concern on the part of ministries, departments and their educational and methodological subdivisions.

Special attention must be paid to improving the content of study plans and textbooks and to organizing the educational process.

It is necessary to establish strict control over the fulfillment of study plans and curriculums in a full volume.

As before, course training must be developed. At the same time, not all ministries and departments pay the necessary attention to this. In the Ministry of Instrument Making, Automation Equipment and Control Systems and the Ministry of the Automotive Industry in 1983 less than 10 percent of the total number of the trained workers were taught at courses. Inefficient individual training predominates in the Ministry of the Medical Industry and the USSR Ministry of Communications.

Highly skilled production workers, who work as teachers and instructors in onthe-job training, play a paramount role in the successful fulfillment of the tasks concerning an improvement in the quality of workers' training. There are now 1.7 million of them. They make a significant contribution to the cause of improvement in the training, skills and education of workers.

Remarkable cadres have developed in many sectors. Their extensive labor and pedagogical activity has been rewarded with the homeland's high awards. They include Hero of Socialist Labor R. K. Prusova, teacher-instructor at the Minsk Tractor Plant, Hero of Socialist Labor A. I. Nefedov, brigade leader at the Sumkhimstroy Trust, Hero of Socialist Labor L. I. Parfenova, winner of the USSR State Prize, deputy director of the training center at the Kalininsk Cotton Combine, A. Ya. Shabanova, chief of the Technical Training Department at the First State Bearing Plant, and many others.

In accordance with the basic directions of the school reform the CPSU Central Committee and the USSR Council of Ministers adopted a decree on improving the training and skills of pedagogical personnel of the system of education and vocational and technical training. The tasks and requirements envisaged in it also apply completely to engineering and pedagogical personnel engaged in on-the-job training of workers. On the basis of the new requirements all sectors should take effective measures to improve the selection of workers engaged in training. It is necessary to enlist more labor veterans, highly skilled specialists and advanced production workers and innovators in training and educational work.

Tutorship acquires ever greater importance in the cause of training and education of young workers. It becomes an objectively natural social need. It is necessary to pay constant attention to the development of this patriotic movement, to systematically work with tutors and to raise their ideological-theoretical level and pedagogical skills. Mass universal compulsory pedagogical education for tutors must be organized.

The training of personnel for enterprises and organizations of the agroindustrial complex should be discussed especially. The May (1982) Plenum of the CPSU Central Committee approved the USSR Food Program for the Period Until 1990. The accomplishment of the tasks set in it requires a significant improvement in the provision of kolkhozes, sovkhozes and all links of the agroindustrial complex with skilled personnel, primarily with mass trade workers.

Vocational and technical schools are the main sources of replenishment of the enterprises of the agroindustrial complex with skilled personnel. However, only 50 percent of the need of agriculture for worker personnel is now met by them. In connection with this mass trade personnel are trained and retrained on a large scale by the enterprises and farms themselves.

Technical progress dictates the need to increase the training of mechanization experts of broad specialization, that is, tractor and machine operators, in the very near future. For this it is necessary to concentrate the training of mechanization experts basically in the educational institutions of the USSR State Committee for Vocational and Technical Education and at training centers and to reduce it directly in organizations and farms, where often the proper conditions have not been created for this.

The establishment of an appropriate industrial training base at enterprises and organizations is the necessary condition for ensuring a high level of onthe-job vocational training of workers. The importance of this problem especially rises now, when in accordance with the basic directions of the school reform they are entrusted with important tasks concerning the organization of labor training, vocational guidance of schoolchildren and their socially useful productive labor. A successful implementation of these tasks will require the strengthening of the existing industrial training base, as well as the establishment of new training shops, sections, workshops and other training work places.

During the 11th Five-Year Plan enterprises did a great deal to develop the training base. Throughout the national economy during the review period alone more than 20,000 classrooms, study rooms, shops, sections and grounds were additionally equipped at enterprises and 260 training centers and 192 training stations were put into operation.

At the same time, as the results of the one-time recording conducted by the USSR Central Statistical Administration in 1983 have shown, in sectors there is still a significant number of enterprises, where the industrial training base does not correspond to standards. Small training centers and stations established at enterprises and organizations predominate in most sectors. At the same time, insufficient work is done on the establishment of sectorial and intersectorial educational institutions for the centralized training of

workers. All this indicates that it is necessary to do extensive work so that the training base of enterprises, organizations and training centers corresponds to the requirements placed on it.

Improving the practice of development and organization of the fulfillment of plans for on-the-job vocational training of workers remains the most important problem. Despite the measures taken, in some sectors there are significant shortcomings in this matter. Often plans for the training of workers are drawn up without taking into consideration the need of production and not on the basis of balance calculations. Plans for improvement of skills are not always coordinated with plans for the introduction of new technology. Some ministries do not promptly present annual assignments for personnel training to subordinate enterprises.

The complication of the tasks facing the system of on-the-job vocational training of workers requires a more extensive implementation and improvement in the quality of scientific research on these problems. We have a big scientific potential for this. However, problems of on-the-job vocational training of personnel are not yet investigated sufficiently. They should be more widely reflected in the scientific work plans of academic and higher educational institutions, as well as sectorial scientific institutions. This must be taken into consideration during the development of scientific work plans for the 12th Five-Year Plan.

Problems of on-the-job training and improvement in the skills of worker personnel now require a significant improvement in the work on the dissemination of advanced experience in this field. The press, television, radio and the Exhibition of USSR National Economic Achievements should have their say here.

There are many tasks in the matter of on-the-job vocational training of workers. Their accomplishment requires constant attention and active organizational work on the part of ministries, departments and labor and vocational and technical education organs. In sectors and throughout the country for the 12th Five-Year Plan it is necessary to develop an overall program for on-the-job training and improvement in the skills of personnel with due regard for the reform in education and present tasks. This work should be done in close cooperation with party, Soviet, trade union and Komsomol organizations.

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**EDUCATION** 

BETTER EDUCATION--KEY TO QUALITY LABOR FORCE

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[Article by N. Boyko, candidate of economic sciences: "Improving the Educational Level--the Path to Qualitative Improvement of the Labor Force"]

[Text] At the contemporary stage in our society's economic development greater demands are being made of scientific research, a fact reflected in materials from the 26th party congress and the June 1983 and subsequent plenums of the CPSU Central Committee. "We must make a resolute turn toward the real, practical tasks which life is setting for our society," the June 1983 Plenum of the CPSU Central Committee stated, among other things. The task of making more practical and effective use of the society's labor force and increasing its output is unquestionably one of these tasks. If we look at it in the broad sense (that is, if we include not only live labor during the specific, current period, but past labor as well), it basically coincides with the task of making public production more effective.

The scientific and technical revolution and the intensification of public production being accomplished under developed socialism are fundamentally altering the role of the worker, agent of the work force in the labor process. That role, is not only being altered by the scientific and technical reforms but is also serving as the most important prerequisite for and ultimately the only means of accomplishing qualitative advances in production. It is clear that the development of measures to improve management of the national economy, measures designed to enhance the effectiveness and intensify socialist production, must embrace public production as a whole, must be based on the unity of production's material and human factors. There can be no doubt as to the worker's prime role, however. It is the worker, after all, who has created production's material factors, and only the worker can create them (if we do not consider nature's material which is ready to be used).

Our national economy is encountering a shortage of workers for the first time in its peacetime development. The 26th CPSU Congress named the reduction in the influx of workers as one of the primary factors complicating economic development. We know that the specific demographic dynamics had a certain role in the creation of this situation. The economic literature contains no clear-cut assessment of the situation referred to as applicable to manpower resources. The opinion is expressed, for example, that the existing shortage of workers is a relative thing and that the national economy has the necessary manpower reserves. There is

apparently a grain of reason both in the theory that there is an absolute shortage of workers and in the opinion that the shortage is relative. It is no doubt a matter of one's point of view, of what specific unit (region, branch, type of work, and so forth) one has in mind. Further, in-depth study of the problem is needed.

It is important to stress the fact that no matter how it is actually manifested, it exists. Questions pertaining to the efficient use of the work force are always urgent, regardless of the demographic situation. The latter has only intensified their urgency.

Numerous proposals are put forth in the literature as a way out of the pressing situation which has developed (measures to affect the changing demographic situation, to make better use of the work of pensioners, and so forth). While not rejecting the need to seek sources for supplementing the work force in the current, specific management situation, it is our opinion that we should still acknowledge that the focus in the search for labor reserves must be in another area. This area is not separate from the main problems of economic development but essentially coincides with the sphere of their resolution. We refer to the general elaboration of problems of intensifying public production, to the development of the intensive type of reproduction. It is impossible to convert the economy to the intensive path of development without converting to intensive reproduction of the work force. The latter is an inseparable element of intensification, to a large extent the determining element.

It is our opinion that intensification of the work force's reproduction should be manifested primarily in the improvement of its qualitative essence. During periods of basic restructuring of the society's materials and equipment base, a work force of a new quality becomes an essential prerequisite for applying the achievements of scientific and technical progress and intensifying production. The qualitative reform of production's material factor and growth in the productivity of public labor produce a relative reduction in the national economy's need for more workers, although they impose new and ordinarily higher demands with respect to the worker's training and ultimately alter the employment structure. In the situation of the increasing complexity of the work and its enrichment with elements of intellectual activity, education is the most important quality characteristic of the work force.

Our nation has achieved significant successes with respect to raising the educational level of the employed population. According to the last three censuses 17 percent of the workers had a higher or secondary education in 1959, the figure rising to 34 percent in 1970, and exceeding 54 percent according to the 1979 census. The portion of workers with an incomplete secondary education in 1979 was practically the same as in 1959, however--26.2 percent--a drop of 4.9 percent from the 1970 level. Significant changes occurred in the group of workers with a primary education. The portion of workers accounted for by them dropped consistently: 33.1 percent in 1959, 24.8 percent in 1970 and 16.3 percent in 1979.4

The contemporary stage in our nation's economic development is characterized by a rapid rise in the educational level of employed workers in the USSR as a whole,

a rise considerably exceeding rates of growth of the employed population (see Table 1).

Table 1. Changes in the Educational Level of the Employed Population According to the Censuses of 1959, 1970 and 1979\*

	Total	Number of people with education per 1,000 employed										
Year	employed population (thousands)	Higher	Incomplete higher	Secondary special- ized	General second- ary	Incom- plete second- ary	Prima- ry	Lacking primary				
1959	99,130	33	9	67	64	260	331	236				
1970	115,204	65	13	105	159	311	248	99				
1979	134,860	100	11	156	276	262	163	32				
1970 (% of												
1959)	116.2	197.0	144.5	156.7	248.4	119.4	74.9	41.9				
1979 (% of												
1970)	117.1	153.8	84.6	148.5	173.5	84.2	65.7	32.3				
1979												
(% of												
1959)	136.0	303	122.2	232.8	431.2,	100.7	49.2	13.5				

<sup>\*</sup> Based on data from "Results of the All-Union Census of 1970," Vol. III, p 408; "Results of the All-Union Census of 1970," Moscow, 1973, Vol. VI, pp. 6-7; VESTNIK STATISTIKI, No. 6, 1980, p. 59; VESTNIK STATISTIKI, No. 1, 1981, p 67.

Table 1 shows that the number of people with a general secondary education grew especially rapidly. At the same time the percentage of employed people with less than a secondary education consistently dropped: from 82.7 percent in 1959 to 65.8 percent and 45.7 percent in 1979.

Regions of the nation and social groups of the workers with a relatively low educational level (less than a secondary education) must be identified for purposes of defining ways to further raise the educational level of the employed population and to take steps to provide all areas of the national economy with skilled workers. In the situation of the scientific and technical revolution a worker must have a secondary education in order to take his place in production.

During the period between the 1959 and 1970 censuses the percentage of employed people lacking a secondary education fell by 16.9 percent, but two thirds of the workers still lacked a secondary education at the beginning of the 70's. In addition, the process was not uniform for the different regions. There was a significant reduction in the percentage of workers lacking a secondary education in the Transcaucasus republics, where the specific portion accounted for by this category of workers was below the All-Union level. The reduction in this specific group of workers proceded slowly in the Moldavian, Lithuanian and Tajik SSR's, however, which have a higher specific portion of workers with a low

educational level than the average All-Union figure. The reducation was 20.4, 20.3 and 21.5 percent respectively, and the number of workers lacking a secondary education was reduced to 58.8, 54.4 and 49.3 percent respectively in the Azerbaijan, Armenian and Georgian SSR's, for example, whereas the drop amounted to 13.8 and the specific portion of these workers amounted to 77.3 percent in the Moldavian SSR, and the corresponding figures for the Lithuanian and Tajik SSR's were 14.2 and 74.2 percent, and 16.4 and 69.6 percent.

The reduction in the portion of workers lacking a secondary education occurred more rapidly between the 1970 and 1979 censuses, and the portion accounted for by this category of workers fell by 20.1 percent for the USSR as a whole. This trend becomes even more favorable when we consider the fact that less time elapsed between the last two censuses than the previous period and that there was more intensive saturation of the national economy with workers with more education. Furthermore, there was a significant advance in the figures for those republics in which the employed population had previously had a lower level of education. In the Tajik SSR, for example, the number lacking a secondary education fell by 22.5 percent and the portion accounted for by this category of workers exceeded the USSR level by only 1.4 percent, whereas the difference was 3.8 percent according to the 1970 census. The reducation was 20.6 and 20.3 percent respectively for the Lithuanian and Moldavian SSR's, as a result of which the All-Union level was exceeded there by 7.9 and 8.3 percent respectively, compared with 8.4 and 11.5 percent in 1970.

The dynamics of the educational level among individuals lacking a secondary education can be assessed for different social groups of the employed population from the results of the last two censuses (see Table 2).

Table 2. Changes in Educational Level of Workers Lacking a Secondary Education by Social Groups of Population (percentages)\*

	1959				1970			1979				
Social	Total lacking secondary education	Including			Including up a			-np	Including			
group		With incomplete secondary edu-	cation With primary education	Lacking primary education	Total lacking secondary education	With incomplete secondary edu-	cation With primary education	Lacking primary education	Total lacking secondary edu cation	With incomplete secondary edu-	cation With primary education	Lacking primary education
Blue-col	lar											
workers	91.6	31.2	41.2	19.2	80.1	38.7	30.8	10.6	58.3	34.3	20.3	3.7
White-co	llar											
workers Kolkhoz	33.6	24.3	8.1	1.2	21.0	16.4	3.9	0.7	9.1	7.3	1.6	0.2
workers	96.8	19.4	35.5	41.9	89.7	29.0	39.3	21.4	71.1	31.0	32.9	7.8

<sup>\*</sup> Based on date from "Results of the All-Union Census of 1970," Vol. V, p. 66; VESTNIK STATISTIKI, No. 2, 1981, p. 63.

Table 2 shows fairly significant differences. Thir is especially noticeable when comparing the level of education of kolkhoz and other blue-collar workers with that of white-collar workers. It also shows a clear and favorable trend toward a reduction in the percentage of individuals lacking a secondary education during the relatively brief period of time between the censuses. For one thing, the original portion of individuals lacking a secondary education among the kolkhoz workers was reduced slowly. It had dropped by only 7.1 percent by 1970. In 1979 the specific portion of workers lacking a secondary education had been reduced by 18.6 percent.

Another feature is also noticeable. While the largest reduction in the group of people lacking a secondary education occurred among kolkhoz workers between 1959 and 1970 (20.5 percent), there was an increase of 3.8 percent in the number of individuals with a primary education, and the increase was even more marked, 9.6 percent, for people with an incomplete secondary education. The situation changed between 1970 and 1979. The reduction in the portion of individuals with that level of education continued not only in the group of workers lacking a primary education (13.6 percent), but it also occurred among workers with a primary education (a reduction of 6.4 percent). The increase in the portion of workers with an incomplete secondary education is slowing markedly. The increase in this portion of the workers was 2 percent. The reduction in the portion of workers lacking a secondary education is also being accelerated among the blue-collar workers. During the periods mentioned (1959-1970 and 1970-1979) the rate of reduction increased from 11.5 to 21.8 percent.

As technical progress continues, the demands made of the workers' educational level will grow. This will be especially true of kolkhoz and other blue-collar workers. This gives rise to corresponding practical tasks.

While the workers' educational level is an essential condition for his inclusion into public production, the actual use of the qualitatively new work force is determined by the level of employment and its structure. And this completes, as it were, the description of the qualitative state of the work force, since the application of the level achieved and its educational potential is ultimately brought about in the process of using the manpower. And so, the creation of the objectively essential workforce quality is accomplished within the unity and interdependence of these two component indices. 10

Within the framework of this type of dominant production relations the efficient structure of employment with respect to quality and quantity is specifically defined for each stage in the development of the productive forces and is fundamentally modified during periods of their revolutionary reform. Consequently, the shaping of an efficient employment structure occurs as a result of appropriate preparation of both the human and material factors in production. The slow adoption of scientific and technical achievements, especially in certain sectors, jobs, and so forth, is retarding realization of the economic potential inherent in the improved educational level of the population and creating discrepancies, which are manifested in the shortage of workers for job with a low level of mechinization. Attempts to remedy the situation by paying higher wages to these categories of workers are contrary to the economic law of distribution according to labor and create new discrepancies by diminishing the importance of

and reducing the incentive to improve one's skills. This, in turn, results in the need to use workers with a relatively low skills level at jobs requiring more complex labor.  $^{11}$ 

And so, the improvement of the educational level, which creates the necessary conditions for the next job-skills reforms, must occur in accordance with the technical improvement of production. Public ownership of the means of production objectively creates the possibility for and makes necessary planned and purposive regulation by the society of both of the above-mentioned processes in their interrelationship. In reality, however, these mutually conditioned phenomena acquire a certain autonomy, as it were, capable of producing a certain disconnectedness. It has an extremely important role in the development of the shortage of workers in certain sectors of our public production. I would stress in conclusion that socialism resolves problems arising in the course of its development in the way which conforms most fully to its nature. This fully applies also to the problem of manpower resources. If their growth is dropping, the only solution is to accelerate even more the improvement of the workers' training. This is in their own personal interest and in the interest of the entire society.

### **FOOTNOTES**

- "Materialy Plenuma Tsentral'nogo Komiteta KPSS 14-15 iyunya 1983 goda" [Material From the 14-15 June 1983 Plenum of the CPSU Central Committee], Moscow, 1983, p 6.
- 2. "Materialy XXVI s"yezda KPSS" [Material From the 26th CPSU Congress], Moscow, 1981, p 38.
- 3. Specifically, V. Kostakov feels: "The manpower shortage phenomena are relative and can therefore be eliminated within a relatively short time." (in the book: "Territorial'nyye osobennosti formirovaniya ratsional'noy zanyatosti naseleniya" [Specific Territorial Features in the Shaping of Efficient Employment of the Population], Moscow, 1973, p. 102). "According to calculations by the State Committee for Labor and Social Problems," A. Bachurin writes, "the need in industry, construction, agriculture, transport and communications, consumer and municipal services can be reduced by approximately 3.7-4.0 million workers during the 11th five-year period just as a result of measures to achieve scientific organization of labor." (A. Bachurin, "Problems of Improving the Use of Manpower Resources," PLANOVOYE KHOZYAYSTVO, No. 1, 1982, p. 27).
- 4 Calculated from data contained in "Results of the All-Union Census of 1970," Moscow, 1972, Vol. III, p. 408; VESTNIK STATISTIKI, No. 2, 1981, p. 63. Also see "Naseleniye SSSR" [The Population of the USSR], Moscow, 1983, p. 116.
- 5. Calculated from data contained in "Results..." op. cit., p. 408; VESTNIK STATISTIKI, No. 6, 1980, p. 59.
- 6. Many writers have pointed this out. Read, for example: L. Kostin, "Proizvoditel'nost' truda i tekhnicheskiy progress" [Labor Productivity and Technical Progress], Moscow, 1974, pp. 183-184; V. Turchenko, "Nauchnotekhnicheskiy progress i revolyutsiya v obrazovanii" [Scientific and Technical Progress and the Revolution in Education], Moscow, 1973, p. 68; and others.

- 7. Calculated from data contained in "Results..." op. cit., pp. 408-558.
- 8. Ibid., pp. 408-558: VESTNIK STATISTIKI, No. 2, 1981, pp. 63-78.
- 9. Ibid., Vol. 5, p. 66; VESTNIK STATISTIKI, No. 2, 1981, p 63.
- 10. In this case we are not considering the characteristic of work-force quality which comes after the educational level--its job-skills makeup. This would be impossible in a single article.
- 11. As V. Sidorov points out, the past 20 years have been characterized by an every-increasing lag in the average skills category of the workers behind the skills level of the jobs (V. Sidorov, "The Effectiveness of the Work and the Quality of the Workers' Training," EKONOMIKA I ORGANIZATSIYA PROMYSHLEN-NOGO PROIZVODSTVA, NO. 1, 1981, p. 156).

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DEMOGRAPHY

DEMOGRAPHIC, HEALTH STATISTICIANS CALL FOR BETTER ANALYSIS

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[Article by R. Dmitriyeva, candidate of economic sciences, chief of Department of Population and Health-Care Statistics of the USSR Central Statistical Administration, and Yu. Gorokhova, chief of Department of Population and Health-Care Statistics of Ukrainian SSR Central Statistical Administration: "Improve Analysis of Population and Health-Care Statistics"]

[Text] The decisions of the 26th CPSU Congress assign the task of conducting an effective demographic policy intended to promote strengthening of the family, creating better conditions for combining motherhood with active participation of women in labor and public activity, improving the maintenance of children and those incapable of working, strengthening the health of Soviet people and increasing the life span.

In recent years, the CPSU Central Committee and the USSR Council of Ministers promulgated a number of decrees aimed at implementation of measures of demographic policy, strengthening of the family and creation of better conditions for women who are mothers. We shall list only some of them: "On Measures for Increasing State Aid to Families with Children," "On Measures for Further Improving Public Health Care," "On Additional Measures for Improving Health Protection of the Population," "On Further Developing the Mass Character of Physical Culture and Sports," "On Measures for Further Improving the Social Security of the Population" and others.

The economic and social program aimed at an undeviating rise of the people's material and cultural level and the creation of better conditions for all-around development of the individual on the basis of a further rise in the efficiency of all public production, systematically being carried out by the party and the state, has had an impact on demographic processes. In 1983, a marked increase in the birthrate took place. In the country, 5.5 million children were born—that is more than in any postwar year. The general indicator of the birthrate exceeded 20 infants born per 1,000 thousand persons, which was the birthrate level in the beginning of the '60s. The rise of the birthrate was biggest in the Russian Federation, the Baltic region, the Ukraine and Belorussia, that is, there where the highest level of employment of women and the lowest birthrate indicators are observed. This attests to

the effectiveness of undertaken measures and to the correctness of the basic course of demographic policy aimed at helping the working woman who is a mother.

Certain positive changes were noted in the behavior of indicators characterizing the health of the population: the death rate of the population is going is going down in some age groups, and a more favorable situation is coming about in regard to falling ill with certain diseases.

The departments of population and health-care statistics of the USSR Central Statistical Administration and the central statistical administrations of the union republics as well as local statistical organs are systematically preparing reports and statistical materials characterizing the demographic situation in the country, the dynamics of the birthrate, morbidity and mortality as well as the progress of fulfillment of the decrees of the CPSU Central Committee and the USSR Council of Ministers on questions of protection of health, social security, development of physical culture, sports, and tourism and reduction of production accidents. This helps to determine the effectiveness and possible directions of demographic policy and to disclose unsolved problems. In the years of the 11th Five-Year Plan reports were prepared on the birthrate and death rate of the population, on the average life span, on the demographic situation in rural localities, on marriages and divorces, on morbidity and mortality from individual diseases and much else.

For further improvement of economic work, major importance is attached to deeper analysis of available information and acquisition of new data on the basis of an improved system of statistical indicators.

It should be noted in this connection that the resources of the information base have far from been exhausted. This applies primarily to the analysis of data on population morbidity and death rate, inasmuch as it is possible to judge the effectiveness of the policy aimed at improving the population's health specifically on the basis of health of the population. Furthermore, it is necessary to have effective preventive information, the preparation of which requires constant analysis of change in indicators and the causes producing them.

It is necessary to pay special attention to analysis of the state and development of specialized medical aid. Such a direction of analysis is prompted by the work experience of the central statistical administrations of the union republics, especially the central statistical administrations of Ukrainian SSR and Lithuanian SSR where analytical material on problems of first aid and on stomatological, ophthalmological and surgical aid to the population is being systematically studied by leading republic organs. A result of such analysis is disclosure of "bottlenecks" hindering the full satisfaction of the needs of the population for specialized medical aid.

Questions of medical service for the rural population are constantly in the field of vision of statisticians. On the basis of measures stemming from the decisions of the May (1982) Plenum of the CPSU Central Committee the USSR Central Statistical Administration and the central statistical administrations

of the union republics, local state-statistical organs systematically prepare reports and statistical materials on this topic. The report on specialized aid also singles out questions of medical aid in the countryside. In the immediate years ahead, this problem because of its pressing character deserves the most close attention.

The study of social-economic factors influencing demographic processes may be conducted on the basis of existing statistical information. Since 1979, acts on the civil condition have had introduced in them additional questions making it possible to significantly expand the development of data on the natural movement of the population. Data of current accounting combined with the data of the 1979 All-Union Population Census provided the possibility of studying demographic processes subject to the character of labor, educational level, length of stay at place of permanent residence and so forth.

Detailed elaboration of all criteria contained in acts on the death of a child have made it possible to study the social-demographic factors of child mortality.

The further improvement of the system of statistical indicators contributes to the improvement of an effective analysis of the course of fulfillment of the corresponding decrees of leading organs. Thus since 1980 the reporting of outpatient and polyclinic institutions provides an indicator of the capacity (number of visits per shift), which is of great importance for the planning of a network of these institutions. Furthermore, indicators were introduced that characterized the degree of provision of outpatient and polyclinic facilities with medical personnel, which makes it possible to adopt measures for their fuller staffing with appropriate personnel. With the aid of the new indicators, it is possible to evaluate the availability of fixed, outpatient and polyclinic aid to the population of rural districts.

Much attention is paid in the decree on questions of health care to prevention of morbidity and the introduction of yearly preventive medical examinations for the entire population of the country. In this connection, it is necessary to establish required accounting and reporting documentation and also to work out a system of indicators characterizing the level of dispensary service and preventive work among the population.

In recent years, reporting has also been improved on sanatorium treatment and organized rest of workers. Today statistics has at its disposal more detailed data on sanatoriums and boarding facilities for the treatment of parents with children, on sanatoriums-preventoriums and others.

Additional reporting was introduced. Its indicators provide the possibility of determining worktime losses in connection with temporary incapacitation and also analyzing their causes.

Together with the AUCCTU and interested departments, there was worked out for enterprises of all sectors of the national economy a single reporting form on production accidents which provided a list of causes and factors of accidents. A number of new indicators were introduced making it possible to study this problem more thoroughly, to describe the extent of trauma among women and to

determine the total volume of expenditures for the protection of labor. At the present time, indicators of the material consequences of accidents and breakdowns are being additionally developed. With the help of these indicators, it is possible to analyze questions in detail and in particular to determine the direct material damage to an enterprise from accidents and breakdowns as well as outlays for its compensation to the victims and a number of others.

In reporting on traumas and poisonings, a special place has been given to traumas in everyday life, with their distribution by place of origin. Analysis of the indicated data will contribute to development of measures for the prevention of traumatism in everyday life.

The introduction of plan indicators into reporting on physical culture and sports makes it possible to track the fulfillment of targets for the development of mass character of physical culture and the expansion and effective utilization of sports structures. Furthermore, the reporting also includes indicators characterizing sports work with the population at place of residence, which will contribute to the study of the state of affairs in this field and to having physical culture and sports enter the everyday life of Soviet people.

Indicators of effective simultaneous reporting on the number of pensioners make it possible to keep track of the course of fulfillment of the decisions of the 26th CPSU Congress on improving pension security.

For in-depth and complex analysis of demographic phenomena, additional materials should be used. Existing statistical information cannot always illumine the entire complex mechanism of the causes and factors of demographic processes, the influence of which changes under different social conditions. The need for deeper study of the conditionality of these processes creates the need for conducting special surveys.

The largest survey of this kind will be conducted in 1985. The results of the selective social-demographic survey will provide demographic, national, cultural and other characteristics of the population with whose help it will be possible to study the impact of such factors on demographic processes as educational level, nationality, income, housing conditions and others. Special attention will be paid to a stally of the fertility rate in women of different social-demographic groups depending on the benefits available to the family. For the improvement of long-term demographic calculations, information on the expected number of children in a family will be of major importance. The data of this survey are of major interest to the country's planning organs, inasmuch as with their aid it is possible to establish the most effective directions of demographic policy that would serve as a guide in the future and determine the conditions under which it would be possible to bring the unemployed able-bodied population into public production.

An important source of information which could be of aid in the analysis of the demographic situation, causes and factors of demographic processes is data of selective budget surveys of families of workers, employes and kolkhoz farmers. In some years, in addition to the study of the population's budgets, surveys were conducted among women on the existing and anticipated number of children. Also issues concerning marriage rate were examined. It needs to be said that the very rich information obtained as the result of such surveys unfortunately is far from fully utilized. The rather extended dynamics of the compared indicators, a detailed characterization of the birthrate and the marriage rate in combination with social-economic characteristics and a detailed program of development of data corresponding to present-day requirements of demographic science--all this lends a special value to the materials of the surveys. For this reason it is desirable that these materials find broader application in economic work relating to population questions at state statistical organs.

Additional information can also be obtained through the means of one-time surveys. At the present time, the first steps have been taken in this direction. For example, the experience of the Central Statistical Administration of Ukrainian SSR, which has been practicing conducting such surveys for several years, presents major interest.

With the help of a selective survey conducted in central rayons, district hospitals, outpatient clinics and paramedic-midwife centers, questions concerning turnovern of medical personnel, especially young specialists, at therapy and treatment facilities in rural localities; provision of therapy and treatment facilities with equipment, stock goods and medicines; observance of health and sanitation and anti-epidemic measures in maternity facilities; existence of mobile outpatient clinics and traveling women's consultation clinics; progress of construction of district hospitals and paramedic-midwife centers and availability of accommodations for personnel of medical institutions; operation of a pharmacy network, provision of the population with medicines and others.

By means of examination of women's and children's consultation clinics and maternity homes, information was obtained on the organization of interhospital pharmacies for serving children's therapeutic and preventive institutions, on the fulfillment of targest for the production of dry milk and on servicing of obstetric and children's institutions, as well as milk kitchens with motor transport and on the organization of divisions of specialized aid to mothers and children.

Data of a survey on the state of housing in rural localities of the republic together with demographic characteristics of the rural population made it possible to analyze more thoroughly the demographic situation in the rural localities of Ukrainian SSR.

The materials of selective surveys conducted by the Ukrainian SSR Central Statistical Administration were used in reports on medical service for the population, on protection of motherhood and childhood, on maintenance and upbringing of children at homes for the child and boarding homes, on psychiatric and drug rehabilitation aid to the population, on serving the aged and invalids, on population migration, on demographic processes, retention of specialists and employment of labor resources.

Interesting material was also obtained by the Belorussian SSR Central Statistical Administration on data of household records: in the context of rural populated places, information was developed on availability of the ablebodied population. With the aid of classification of rural populated places, Belorussian statisticians succeeded with this criterion in describing more fully age disproportion in the republic's rural localities.

The Department of Population and Health-Care Statistics of the USSR Central Statistical Administration plans to expand work of carrying out one-time selective surveys, the data of which are especially important in making an analysis of the course of fulfillment of the decrees of the CPSU Central Committee and the USSR Council of Ministers. Preparations are going on together with interested ministries and departments for conducting surveys on whose basis it will be possible to provide a comprehensive social-demographic characterization of the village. A survey is being conducted this year of the availability of enterprises and institutions of the service sphere to rural populated places. In 1985, a survey is planned of the working and living conditions of rural physicians. The obtained materials could be used in analytical work relating to population and health-care statistics. At the present time, instructions are being prepared on a procedure of working up and analyzing data characterizing the development of health care in rural rayons. Preparatory work has been started for study of public opinion on the quality of tourist service for the population as well as on the state of the material base of tourist-excursion institutions. Preparations are on the agenda for carrying out jointly with the USSR State Committee for Physical Culture and Sports a survey of the effectiveness of use of sports structures as well as accounting of cultural and sports complexes.

Inthe decrees on measures for improving health care, major attention is paid to questions of improvement of working conditions, reduction of industrial trauma and occupational morbidity and expansion of the network of institutions providing medical aid to personnel of industry, construction, transport and agriculture. For the purpose of studying these questions, a survey will be conducted in 1985 of the state of medical service to the population at place of work.

The development of creative contacts with scientific institutions, ministries and departments and sectorial departments of the USSR Central Statistical Administration and the central statistical administrations of union republics contributes to raising the level of economic analysis.

Scientific developments of the Scientific-Research Institute of the USSR Central Statistical Administration provide serious aid in analytical work on questions of demography. During 1871-1983, the demographic department of this institute has completed such major work as investigation of differentiation of demographic processes, improvement and expansion of the system of indicators of the death rate, study of the factors of the population's average life span, analysis of the results of a survey of child mortality and proposals for improving its methodology, analysis of the results of additional processing of the 1979 population census data on the social-demographic characteristics of families and others. The Scientific-Research Institute of the USSR Central

Statistical Administration prepared on the basis of scientific developments reports on the average life span of the rural population, on differences in the death rate of children up to one year of age among social-demographic groups, on regulation of the birthrate, on marriages and divorces and on certain tendencies of the birthrate in the country.

An organized form of cooperation of the Department of Population and Health-Care Statistics of the USSR Central Statistical Administration and the Department of Demography of the Scientific-Research Institute of the USSR Central Statistical Administration is a plan-schedule that designates joint methodological work and systematic, step-by-step preparation of economic reports, development of programs and methods of selective surveys and other work. It should be noted that the creative search of specialists of the Department of Demography of the Scientific-Research Institute of the USSR Central Statistical Administration to a large degree contributes to the development of new topics and new approaches to the analysis of materials concerned with population statistics.

Comprehensiveness of analysis and improvement of its quality are also attained through joint work with ministries and departments. Reports prepared with interested ministries contain a comprehensive analysis of problems and valid concrete proposals. As a rule, broad solutions are adopted on the basis of such reports. In the years of the 11th Five-Year Plan, the USSR Central Statistical Administration together with the USSR Ministry of Health prepared reports on morbidity and mortality from individual causes and with the AUCCTU--on the state of production traumatism. As the experience of the central statistical administrations of the union republics suggests, these contacts in the field of analytical work may be significantly expanded. Thus, in recent years, the Central Statistical Administration of the Ukrainian SSR together with the republics State Committee for Labor prepared reports on the demographic situation in the republic and on migration of the population, with the Ministry of Health -- on psychiatric and narcological aid of the population, with the State Committee for Physical Culture and Sports--on the development of physical culture and sports, with the Ministry of Social Security -- on implementation of measures for improvement of pension security and with the Trade-Union Council -- on the operation of sanatorium-health resort institutions and organization of rest of workers and on production traumatism in organizations of ministries included in the agroindustrial complex. present time, the Ukrainian SSR Central Statistical Administration together with the Institute of Economics of the Ukrainian SSR Academy of Sciences is working on a report on the size of the population and demographic processes.

Improvement of the quality of economic work of the Department of Population and Health Care is likewise ensured by the preparation of reports with other administrations and departments of the USSR Central Statistical Administration. But in this joint work on questions of population and health-care statistics, far from all existing reserves are as yet being realized. Materials of other subdivisions are not always fitted into the general logical scheme of the reports and possess a fragmentary character. Sometimes, instead of a thorough analysis of all the reasons hindering fulfillment of the tasks of these or those decrees, only isolated defects are cited. For the purpose of raising complex analysis to a qualitatively new level, the organization of

preparation of comprehensive reports should first of all be established. Clearly ordering departments need to compile a plan or scheme of a report ahead of time, to determine the program of individual sections and to coordinate related problems with other departments. At the same time, departments taking part in the preparation of a comprehensive report need to show great initiative and interest and bring up root problems in terms of the basic content of the prepared material.

Taking into consideration that the quality of economic reports on questions of population and health-care statistics can be improved through the use of materials of central statistical administrations of union republics, the Department of Population and Health-Care Statistics of the USSR Central Statistical Administration pays special attention to recommendations on analytical work sent to local statistical organs. They contain instructions on unified subject matter of reports for the USSR Central Statistical Administration and the central statistical administrations of the union republics, on indicators that should be analyzed, on dynamics of the data, on a listing of information relating to other branches of statistics that should be included in the analysis and on time periods of preparation of the reports. Early receipt of generalized data on the subject matter of a planned report is also provided in the case of conducting a survey. This year it is planned to utilize the materials presented by the central statistical administrations of union republics in reports on size of the population and demographic processes, on development of sanatorium-health resort treatment and organized rest of workers, on disablement among workers, employes and kolkhoz farmers and on the development of homes with boarding facilities for the aged and invalids.

The joint preparation of reports with interested ministries and departments, use of the result of scientific developments of the Scientific-Research Institute of the USSR Central Statistical Administration, thorough analysis of the available statistical data of current developments and selective surveys, use of the data of other sectorial administrations and departments and also generalized materials of the central statistical administrations of union republics—all this should contribute to raising the level of economic work on population and health-care statistics.

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# METHODOLOGY FOR COMPILING INTER-CENSUS MARRIAGE DATA DEVISED

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[Article by O. Besschetnaya, junior scientific associate, and B. Sivorinovskiy, candidate of economic sciences, department chief at the Scientific Research Institute of the USSR Central Statistical Administration: "A Methodology for Calculating Marital Status in the Population in the Inter-Census Period"]

[Text] Information on the marital status of the population is ordinarily obtained only in years in which the National Census is taken. However, beginning in 1979, an expanded program for registration and processing of information on current accounting of the natural movement of the population and migration permits calculating, on the basis of census information, the marital composition of the populace during the inter-census periods as well. Such accounting is required for more detailed analysis of the processes of marriage and divorce across the USSR as a whole, and in its separate regions. Specifically, in the years following the census, such data make it possible to calculate special coefficients for the marriage and divorce rate, contrasting the number of marriages and divorces with the number of persons in the corresponding marital state. Information on the distribution of people in terms of their marital status can be utilized for analysis of the family structure of the populace. And this is especially useful in connection with the great attention which is presently being given to plans for social development. Information on the marital status of the populace is also required for improving planning of the composition of available housing, production of durable goods, distribution of preschool institutions, schools, hospitals, and the like.

This article proposes a methodology for calculating in the intercensus period the number of persons according to their specific marital situation, for the USSR as a whole and for union republics, based on materials of the 1979 National Census and data from current accounting of population movement.

The initial statistical information required for a current estimate of the marital status of the populace includes:

the number of persons in each category of marital state at the beginning of 1979, based on materials from the National Census (Table No 8s--Distribution of the Populace According to Marital State, Sex and Age);

the number of marriages entered into in the course of the calendar year--for persons not previously married, widowed or divorced (Form No 7--Information on Marriages by Age of Persons Entering into Marriage);

the number of cases of annullment of marriages for the calendar year (Form No 8--Information on Divorces by Age of Divorces and Length of Marriage);

the number of deaths per year, differentiated by marital status (Form No 4zh -- Information on Deceased by Sex, Age and Family Situation);

the number of migrants, married and unmarried (Form No 6--Family Condition of those Arriving and Departing at Age 16 and Older, in Conjunction with the Number of Children up to Age 16, Who Have Arrived (Departed) Together With Their Parents (Guardians);

and, the number of births for the year (Form No 1--Information on Natural Population Movement).

With the aid of these data one can calculate the distribution of the populace according to marital condition, either without accounting for age, or for all persons age 16 or older. Deriving similar information by more detailed age groups is not possible because the records kept on migration does not include the age of the migrants in conjuction with their marital status.

Based on the available statistical information one may calculate the number of persons in the following marital states: married, never married, widowed, and divorced, for the entire population of the USSR; and separately for men and women at the beginning of each year since 1979. For the urban and rural population of the USSR and the population of the individual union republics, estimation is possibly only for two categories of marital states: (married and not married) which are obtained when processing data on migration.

Results of estimaces of the marital composition of the populace must be carefully compared with the estimate of the total size of the population. In order to do this, it is necessary to analyze the number of persons in various marital states after the current estimate of the total population is derived, in order that the final and intermediate results may be utilized, while observing the necessary correlations. All the quantities employed in calculating the marital status of the populace (the number of births, deaths, and data ( migration growth) on a profile of the urban and rural population of one territory or another, must correspond to the final variant of the current estimate of the total size of the population and must include all corrections adopted. At the same time the number of deaths, if they were adjusted, are distributed proportionally by those who were married and not married in accordance with these categories on form No 4zh. For calculation of the number of deaths for the USSR as a whole, they are distributed correspondingly according to the four categories of marital status.

Similarly, the structure of migrational growth (balance of migration) is calculated for the urban population according to marital status. The value for migrational growth of the urban population of a given territory is determined on the basis of the number of married and unmarried persons in proportion to their total number, as shown on form No 6.

However, not all the elements stipulated by the methodology for calculation are provided by statistical information. Processing of data on the number of persons who have arrived in rural areas and who have departed from them is not accomplished in terms of marital status; therefore, the necessary values must be determined by means of estimation. We shall examine one of the possible methods for evaluating changes in the marital composition of the rural population as the result of migration, the one which seems to us to be the most sensible.

The value for migrational growth for the rural territory is distributed over those married and those not married on the basis of the hypothesis that for the rural areas of all territories the number of those departing exceeds the number arriving; that is, the migrational growth is negative. Therefore it is proposed that:

- a) for territories with positive migrational growth all migration of the rural population is attributed to egress of the population to the urban settlements of that same territory; consequently the value for migrational growth (for both sexes) can be distributed according to those who have married and those who have not, in accordance with the corresponding correlation for the urban settlements of that same territory; and,
- b) for territories with negative migrational growth, the growth in the migration of the populace from rural areas is made up of two components:

  1) the flow of migrants from the rural to the urban areas of that same territory, which can be taken as equal to the volume of migrational growth of the urban populace; and 2) the remainder of the migrants, which corresponds to the flow from the countryside to the urban areas of other territories. On this basis the first component is distributed according to marital status in consideration of the makeup of the migrational growth of the urban populace of that same territory, and the second component, in accordance with the proportion of those married and not married among all other migrants of the urban populacle in territories with positive migrational growth. This method of calculation ensures observing the balances for both categories of marital state within each territory and in sum for all territories.

Territorial transformations must be considered in the calculation. In order to do this, the total number of persons of each sex who have moved in the course of the year from the rural populace to the city must be distributed according to those who have married and have not married, according to the correlation which existed at the beginning of the year in the rural populace for the minimum territorial unit on which information is available (republic, kray or oblast).

Additionally, the estimate of the number of persons in different marital states for the year immediately following the census year envisages adjusting the data from current accounting for the census year. The data from current accounting pertains to the period from 1 January 1979 through 31 December 1979, but the census was conducted according to the situation on 17 January. For calculations for 1 January 1980, the census data must be shifted not by a year but by the portion of the year which remains after 17 January; therefore, all data or current accounting for natural population movement and migration must be adjusted; that is, the number of events from the record must be multiplied by a factor of 0.956.

The calculation is carried out in a centralized manner for all territorial subdivisions: first for the USSR and the union republics; then for each republic which is divided into oblasts; then for oblasts, krays and ASSR's. At the same time the estimates for the USSR serve as a basis for balancing the estimates for the union republics; the data on the republics, for balancing the estimates for oblasts, krays, and so on.

When calculating, a table is filled in for men and for women, according to a uniform system. We shall introduce the symbols (for one sex):

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S -population size at the beginning of the year according to the census;
5 -population size at the end of the year;
S -population size at the end of the year without considering migration;
N-number of births:
M-number of deaths;
B -number of marriages;
A-number of divorces;
V -number widowed:
W-population size in settlements which have become urbanized;
L-migrational growth, derived from calculation of total population;
1 -migrational growth of those up to 16 years old, derived from calcula-
   tion of total population;
A -migrational growth at ages 16 years and over as reported;
H-arbitrary migrational growth within a republic;
G-arbitrary migrational growth outside a republic; and,
-external migrational growth.
i = 1 - \text{city}
                        Type of settlement
i =2-country
i =0_in all
K=0-in all
K = 1—married
K = 2 - \text{not married}
                            Category of marital status
K=3—never married
K = 4 - \text{divorced}
K = 5-widowed
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The calculation is properly conducted in several stages. First the number of those married and not married at the end of the year is calculated, considering only natural population movement. For this purpose, for every territorial unit, the following is determined, separately for the urban and rural population:

(a) 
$$\widetilde{S}_{i}' = S_{i} + B_{i} - D_{i} - V_{i} - M_{i};$$
  
(b)  $\widetilde{S}_{i}^{2} = S_{i}^{2} + N_{i} - B_{i} + D_{i} + V_{i} - M_{i}^{2};$   
(c)  $\widetilde{S}_{i}^{0} = \widetilde{S}_{i} + \widetilde{S}_{i}^{2}.$ 

Next migrants are distributed according to marital status for the urban population of each territorial unit:

1) 
$$L_1 = (L^0 - [t_i^0] \frac{A_1}{A_1 + A_2};$$

2) 
$$L_1^2 = L_1^0 - L_1^2$$

Distriution of migrants according to marital status is carried out for the rural population in the following manner:

for territories with positive migrational growth  $L_0>0$ 

a) 
$$L_2 = L_2^0 \cdot \frac{L_1^0}{L_1^0};$$

b) 
$$L_2^2 = L_2^0 - L_2^2$$
;

for territories with negative migrational growth  $L_0 < 0$ 

1) 
$$H_1 = H_2 = -L_1$$

$$H_1^2 = H_2^2 = -L_1^2$$

2) 
$$G_1 = L_1 - H_1$$

3) 
$$G_1^2 = L_1^2 - H_1^2$$

$$G_2^0 = L_2^0 - H_2^0;$$

4) 
$$G_2 = G_2^0 \cdot \frac{\sum G_1'}{\sum G_1^0}, G_2^2 = G_2^0 - G_2'$$

5) 
$$L_2 = H_2 + G_1^2$$
,  $L_2^2 = H_2^2 + G_2^2$ 

Determining the number of married and unmarried persons, taking into consideration migrational and territorial transformations, is carried out in the following manner:

$$\overline{S}_i = \widetilde{S}_i + L_i + V'$$

$$\overline{S}_{i}^{2} = \widetilde{S}_{i}^{2} + L_{i}^{2} + \mathbf{P}^{2};$$

$$\bar{S}_2' = \tilde{S}_2^1 + L_2^1 - W'$$
;

$$\bar{S}_2^2 = \tilde{S}_2^2 + L_2^2 - \mathbf{W}^2.$$

As already indicated, it is possible to calculate the number of people in the four categories of marital status, for the entire population of the USSR, and for men and women separately. The calculation is made on the basis of the following equations:

$$\overline{S}^{1} = S^{1} + B^{0} - D - M^{1} - V - \mu^{1};$$

$$\overline{S}^{3} = S^{3} + N - M^{3} - B^{3} - \mu^{3};$$

$$\overline{S}^{4} = S^{4} + D - M^{4} - B^{4} - \mu^{4};$$

$$\overline{S}^{5} = S^{5} + V - M^{5} - B^{5} - \mu^{5}.$$

When making the final estimate of the size of the population in each category of marital status for the USSR, external migrational growth must be considered separately.

Persons of unknown marital status are distributed according to categories proportional to the number of persons whose marital status is known. At the same time all values for the USSR are derived as the summ of the corresponding values by union republic. Independent distribution of the number of persons of unknown marital status for the USSR can be provided by separating them from the sum of the corresponding values by republic. Therefore, the values  $\overline{S}'$ , and M', required for the estimate for the USSR are derived as the sum of the values for the republics, and the values  $\overline{S}^3$ ,  $\overline{S}^4$ ,  $\overline{S}^5$ ,  $M^3$ ,  $M^4$ , and  $M^5$  are calculated as parts of  $\overline{S}^2$  and  $M^2$  proportional to the data from the census and the accounts.

Inasmuch as one may consider that all those who have married, are widowed or divorced are beyond age 15, with the help of these same formulae one can derive an estimate of the number of persons of the indicated marital categories at age 16 years and older.

In order to determine the number of persons who have never married, of the ages 16 years and older, it is necessary to subtract from the total number of persons in this age group the total number of those who have married, are widowed or divorced.

One must bear in mind that although the proposed method of calculation from available information is only possible at the present time, this method, by virtue of the peculiarity of the accounting, does not provide for strictly matching the calculated data with the data on the makeup of the population in terms of marital status from a future census. The possible sources of divergence are connected, as was already noted, with the use of approximated estimates of the number of rural migrants by marital status. Additionally, divergences may arise because of the incomplete comparability of data on marital condition in censuses and in connection with current accounting for population movement.

Census data, which serve as the basis for the estimates, take into consideration the actual marital situation, based on the principle of self-definition: the census combines the category of "separated", that is, having actually terminated the marriage but not registering the fact, and "divorced", that is having officially and legally terminated the marriage.

Current accounting reflects legal marriages (legal documents on entering and dissolving a marriage). Exceptions comprise information on the marital status of one who has died, which is recorded not only on the basis of documents, but also on the testimony of the relatives of the deceased.

Thus, data from various sources do not altogether match, which means that their use can lead to certain errors. The only attempt to bring out the correlation between registered and nonregistered marriages in the USSR was undertaken in the trial census of 1967 in three of nine regions; therefore, this attempt did not provide an opportunity to adjust the number of nonregistered marriages and divorces in the urban and rural population of each repblic. The relationship of registered and nonregistered marriages can be brought out only with the aid of special research. Errors in calculation which arise for this reason are difficult to evaluate; however, there is no reason to believe that it is large or will increase in proportion to the time which has passed since the census was taken.

Thus, calculating the makeup of the population in terms of marital status can provide estimates sufficiently close to reality, and altogether suitable for practical purposes.

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